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ICF Kaiser draft report

FIELD SUMMARY REPORT FOR 1996 PHASE I AND II SURVEY AND SAMPLING ACTIVITIES AT TA-33, OU 1122

VOLUME 1

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Section 1.0

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INVESTIGATION OF MAIN SITE AND AREA 6, TA-33

1.0 INTRODUCTION

This report summarizes Operable Unit (OU) 1122 Phase I and Phase II Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Voluntary Corrective Actions (VCA), Interim Actions (IA), and Best Management Practices (BMP) conducted at Technical Area-33 (TA-33) Main Site, East Site, South Site, NRAO Site, and Area 6 during fiscal year 1996 and into fiscal year 1997. These activities supported field sampling efforts conducted from November, 1995 through October 11, 1996, as part of Los Alamos National Laboratory (the Laboratory) Environmental Resoration (ER) Program. This report focuses on the Phase I and Phase II activities. Summaries of the VCAs, IAs, and BMPs are presented in Section 4.8 of this report, and final reports detailing some of these VCAs, IAs, and BMPs are presented in Appendices XX and XX.

The TA-33 (Figure 1) Phase I and Phase II activities summarized by this report include:

- Methods for selection of sampling locations;
- Field surveys;
- Field sampling activities;
- Radiation screening during sampling activities;
- Decontamination procedures;
- Equipment release procedures; and
- Waste management.

Field surveys included geodetic, radiation, and geophysical surveys. The purpose of the radiation and geophysics surveys was to locate biased sample locations based on the presence of subsurface objects and elevated (above-background) radiation levels.

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Field sampling activities included surface soil and sediment sampling and shallow subsurface soil sampling using a hand auger and hollow-stem auger drill rig. During the 1996 sampling activities, 273 surface, sediment, structure, and shallow subsurface samples were collected frompotential release sites(PRS) at East Site, South Site, Main Site and Area 6. Figure 1 shows the locations of field activities at TA-33. PRSs investigated during the field campaign inlcuded:

- 33-001(a-e), Phase II
- 33-002(a,b,c), Phase II
- 33-003(b), Phase II
- 33-004(k), Phase I
- 33-006(a), VCA/IA
- 33-007(b), IA, VCA
- 33-008(a), Phase II
- 33-008(b), Phase II
- 33-008(c), Phase I, BMP
- 33-011(d), Phase II
- 33-010(a) VCA
- 33-010(b), VCA, BMP
- 33-010(d), VCA
- 33-010(g), VCA
- 33-013, Phase II
- 33-017, Phase II
- C-33-001, Phase I
- C-33-002, Phase I

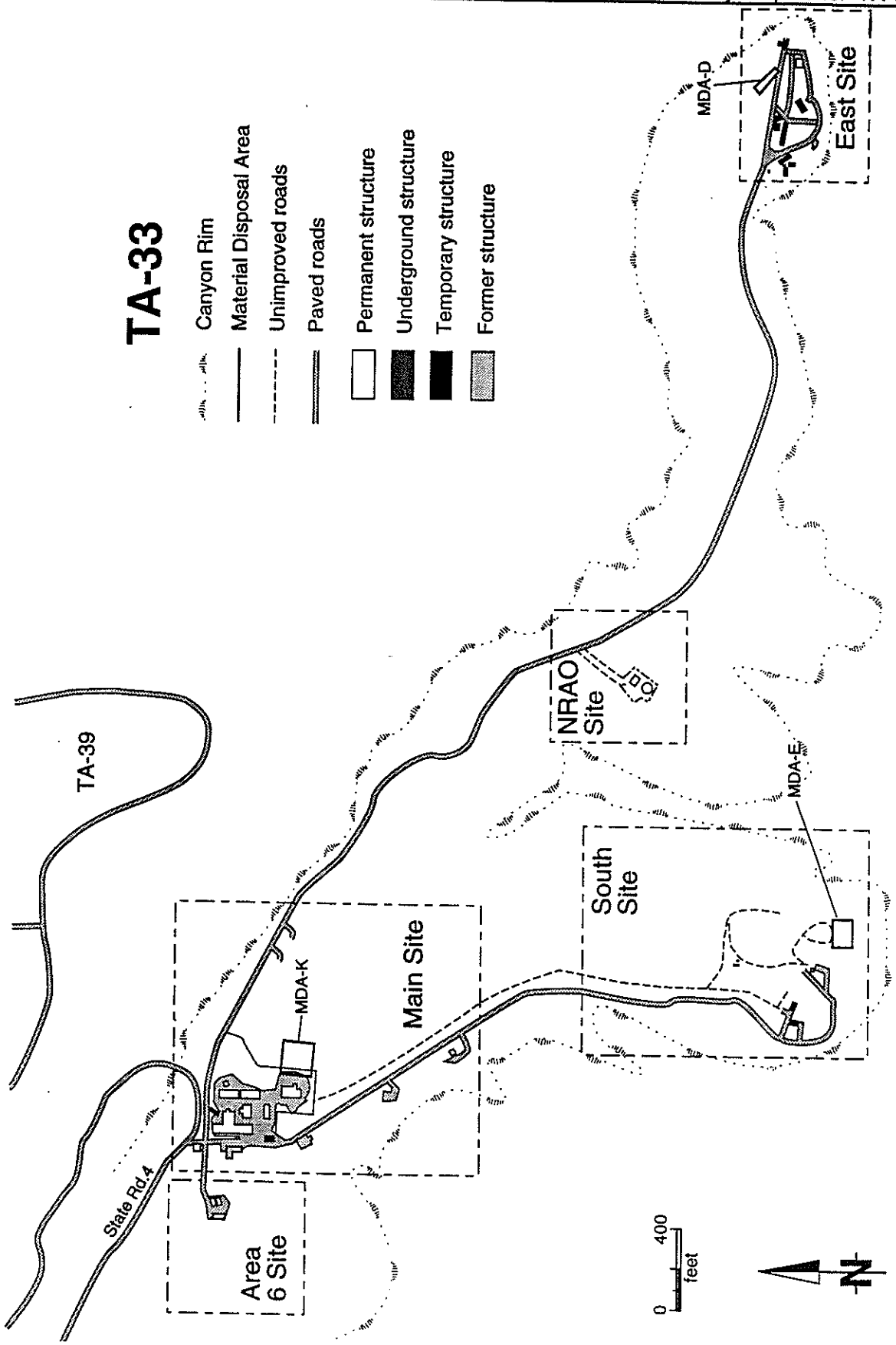


Figure 1. Location of TA-33.

Section 2.0

2.0 SELECTION OF SAMPLING LOCATIONS

Sample locations at TA-33 were selected using the criteria outlined in the RFI Work Plan for OU 1122 (LANL 1992a) and the September, 1995 RFI Reports for TA-33 (LANL 1995a,b). The RFI Work Plan and reports identify the criteria for selecting reconnaissance sample locations and characterization sample locations. Reconnaissance samples provide data that indicate the presence or absence of contamination. Characterization samples provide data needed to complete a baseline risk assessment.

2.1 Reconnaissance Sample Locations (Biased Samples)

Reconnaissance sample locations were selected specifically to maximize the likelihood of detecting contamination that might be present within the PRS of interest. The samples taken from these locations are called "biased samples" because the sample locations were selected based on specific site characteristics and professional judgment. For example, samples were collected at sediment catchment areas because these areas would be in the pathway of contaminants translocated by surface water from upgradient drainages. Samples were collected within sediment catchment areas at the following PRSs:

- Main Site: 33-017
- Main Site: 33-008(c)
- East Site: C-33-002

Surface and subsurface soil sample locations were selected adjacent to or within the following sites:

- sumps at PRSs 33-002b and 33-002c
- septic tank at PRS 33-002(a)
- transformer pads at PRSs C-33-001 and C-33-002
- storage areas at PRSs 33-013, 33-011(d), and 33-017
- chambers at PRS 33-003(b)
- landfills at PRSs 33-008(a), 33-008(b),33-001(a-e), 33-008(c)

These sites were where contaminants were expected to be concentrated. Exhibit 1 identifies the sample locations as being biased or unbiased.

The reconnaissance sampling scheme also included the selection of biased sample locations using field indicators (e.g., visible stains on the soil, presence of debris, and anomalous radiation or geophysical survey measurements) and field screening. Anomalies identified as a result of the geophysical survey were used to assign the locations of one borehole at the Main Site. The geophysics reports are presented in Appendix 1. Visible staining was not observed during sample location selection and was therefore not used for selecting biased sample locations. The presence of surface and subsurface debris was used to select sample locations at PRS 33-008(c). Field screening for PCBs was used to bias the submittal of samples to analytical laboratories at PRSs 33-003(b) and PRS 33-017. PCB screening results equal to or greater than 1 mg/kg were submitted for laboratory analysis.

The radiation survey revealed one area of elevated radiation at PRS 33-011(d) and was used for the selection of one biased sample location.

2.2 Characterization Sample Locations and Randomization Protocol

Characterization samples were selected within PRSs of interest without regard to specific site characteristics or professional judgment. Freedom from judgmental influences on selecting sample locations was achieved by the use of a grid-based randomization protocol and an area-based randomization protocol.

2.2.1 Grid-based Randomization Protocol

The grid-based randomization protocol used was taken from the Environmental Protection Agency (EPA) guidance document "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1, Soils and Solid Media" (EPA 1989). This protocol is based on a preestablished regular grid and uses each point of intersection as a reference point for random sampling locations. The grid-based randomization protocol for selecting random sampling locations conformed to the following procedure:

1. The random number generator used was constrained to provide random numbers from 0.5x to -0.5x where x is the east-west grid

interval distance and from 0.5y to -0.5y where y is the north-south grid interval distance.

2. To determine the sampling location, the resulting values for x and y are used to measure the distances from the intersecting point on the respective north-south and east-west axes.
3. If the resulting location is not feasible (e.g., if it is outside the area that meets the sampling criteria), the randomization process is repeated.

PRSs where sample points were selected using grid-based randomization were:

- former drum storage area 33-013
- chamber 33-003(b)

Exhibit 1 lists the random numbers for each randomly selected sample location. If the randomized point fell outside the area of interest, or was located within a structure, the procedure was repeated, and a new pair of random numbers was derived for an alternate sampling location. All deviations were recorded in the field daily log forms.

2.2.2 Area-based Randomization Protocol

An area-based randomization technique was used for those sample locations where a preestablished regular grid was not prescribed in the RFI Work Plan. If a unique reconnaissance sample location could not be identified (i.e., if a biased sample location could not be determined based on distinct specific site characteristics), the reconnaissance sample location was chosen using an area-based randomization technique that conforms to the following procedure:

1. North-south and east-west dimensions are measured to establish a rectangle that forms the boundaries of the area.
2. The southwest corner of the rectangle is selected as the origin.
3. Two random numbers between 0 and 1 are generated using a random number generator.
4. The north-south dimension (y) is multiplied by one random number, and the east-west dimension (x) is multiplied by the other random number.
5. The resulting values for x and y are used to measure the distances from the origin on the respective north-south and east-west axes to determine the sampling location.
6. If the resulting location is not feasible (i.e., if it is outside the area that meets the sampling criteria), the location is discarded, and the randomization procedure is repeated.

Section 3.0

The sample locations determined using the area-based randomization technique were the sample locations within the following areas:

- The general storage areas at PRS 33-017 and 33-011(d)
- the landfills at PRSs 33-008(a) and 33-008(b)

3.0 FIELD SURVEYS

Land, radiation, and geophysical surveys were conducted at Main Site, East Site, South Site, and Area 6 to assist in

- establishing geodetic control points and coordinates of sample locations;
- biasing sampling locations to areas that exhibit above-background levels of radioactive contamination; and
- and locating subsurface structures.

Techniques that were determined by professional judgment to be redundant or unnecessary were eliminated.

3.1 Land Survey

The land survey was conducted by the ICF Kaiser Engineers (ICF KE) Survey Department in November 1996. The land survey established geodetic control points at East Site, South Site and Main Site from primary survey points set by Global Positioning System (GPS) as published in the LANL Survey Procedures Manual (LANL 1996a). Grid systems were established as required by the RFI Work Plan to identify measurement points for the radiation and geophysical surveys. Sample locations for the May 1996 sampling activities were surveyed by ICF KE personnel using the GPS coordinates that were relative to the established control points. Refer to Figure 2 and Exhibit 2 for sample locations and planar coordinates.

Hubs and tacks were set at most grid points; for those points on hard surfaces, P-K nails were set. A Lietz Set-3 Total Station Theodolite Transit with SDR-2 Data Collector was used to conduct the survey. Data was downloaded to a Hewlett-Packard Model 9000 computer using PacSoft software. Eight control points and eight working points were used to survey in the radiation and geophysical survey grids. All points were plotted in the NAD 27 Coordinate system.

Figure 2

Planar Coordinates for Boreholes

PRS Number	Site ID Number	N-S Planar Coordinates	E-W Planar Coordinates
33-002(a)	33-1696	1740002.9	1638875.2
33-002(c)	33-1697	1740030.6	1638863.1
33-002(b)	33-1328		
33-002(a)	33-1652	1740015.1	1638944.8
33-003(b)	33-1745	1736646.8	1645950.6
33-003(b)	33-1746	1736629.7	1645957.9
33-008(a)	33-1665	1736676.2	1639962.3
33-008(a)	33-1666	1736683.4	1639946.7
33-008(a)	33-1667	1736663.6	1639963.8
33-008(a)	33-1668	1736650.6	1639948.6
33-008(b)	33-1690	1736372.7	1646112.7
33-008(b)	33-1691	1736387.7	1646097.1
33-008(b)	33-1692	1736392.0	1646049.4
33-008(b)	33-1693	1736394.6	1646008.5
33-008(b)	33-1694	1736375.4	1646032.8
33-008(b)	33-1695	1740002.9	1638875.2
33-001(a-e)	33-1653	1735871.8	1639931.9
33-001(a-e)	33-1654	1735988.0	1640121.3
33-008(c)	33-1675	1740239.0	1638899.7
33-008(c)	33-1676	1740236.2	1638881.1
33-008(c)	33-1677	1740252.4	1638877.6
33-008(c)	33-1679	1740323.3	1638936.9
33-008(c)	33-1680	1740313.9	1638944.8
33-008(c)	33-1681	1740305.6	1638929.6
33-008(c)	33-1682	1740301.8	1638950.0

3.2 Radiation Survey

A radiation survey was conducted by ESH-1 personnel at Main Site PRS 33-011(d). The survey was conducted using an Eberline E-600 held at 3 feet above the ground surface. This instrument uses an internal nominal 1-inch NaI detector to measure low-energy gamma radiation for the detection of uranium. The objective of the surveys was to direct the location of reconnaissance samples if above-background radiation levels were found. Data from the radiation surveys conducted at the Main Site were recorded on the Radiation Survey Forms supplied by the Laboratory.

Methods and results from the radiation surveys for the Main Site are discussed in Sections 3.2.1 and 3.2.2, respectively. The radiation survey results are presented in Appendix 9.

3.2.1 Main Site—Methods

The radiation survey was conducted at PRSs 33-011(d). The survey extended to the fence that bounds the paved area south and west of building TA-33-20, and to a distance of 25 feet north and east of the building. Gamma scanning was performed by swinging a soidium-iodide detector in a pendulum manner as close to the paved surface as possible while the surveyor progressed at a slow walk.

3.2.2 Main Site—Results

Results from the radiation survey indicated one anomalous reading of twice the background rate and therefore was used to dictate one sample location. The point had radioactivity readings of 26,000 counts per minute (CPM), which was twice the background rate of 13,000 cpm. Readings taken at all other locationswere at background levels.

3.3 Geophysical Surveys

Geophysical surveys were conducted at two sites within Main Site by ICF KE personnel. Surveys were conducted in June of 1996. One survey consisted of electromagnetic (EM) and time-domain metal detection method (TDMD) surveys at the Main Site surface disposal area, 33-008(c). The EM method was used to assess the overall amount and lateral extent of buried non-metallic and metallic debris. The TDMD was employed to assess the location, lateral extent and general depth of buried metallic debris (ferrous and non-ferrous).

The second survey consisted of a resistivity geophysical survey at Main Site MDA-K, PRSs 33-002(a,b,c). The objective of the resistivity survey was to obtain further resistivity information west of the anomoly (discovered during the 1989,1993 and 1995 geophysical surveys at MDA-K) that exhibits high tritium concentrations, as well as in the vicinity of the PRS 33-002 septic tanks and sumps. The purpose of the

survey was to trace the anomoly westward in order to assess its location (origin) within the PRS as the possible source of contamination.

The EM instrumentation consisted of a Geonics EM31-DL ground conductivity meter and an Omnidata data logger. The TDMD instrumentation consisted of the Geonics EM61 high sensitivity high resolution time-domain metal detector which detects both ferrous and non-ferrous metal objects. An Advanced Geosciences Inc. Sting R1 Resistivity Meter with non-polarizing electrodes was used for the resistivity survey.

Before each survey was performed field calibrations were conducted on all instrumentation. Before performing the EM surveys, zero-calibration and phase-calibration procedures were performed on the EM system and recorded in a field notebook. These calibration procedures were performed where background readings were observed.

The instrumentation readings were downloaded to a computer following each of the field surveys. At the conclusion of the surveys, the data was collated and plotted using a computer graphics program (Golden Software SURFER©).

Methods and results from the EM and TDMD geophysical surveys for 33-008(c) are discussed in Sections 3.3.1 and 3.3.2, respectively, and the methods and results of the resistivity survey at MDA-K are discussed in section 3.3.3 and 3.3.4, respectively. Methods and results are also discussed in the geophysical survey reports presented in Appendix 10.

3.3.1 33-008(c)—Survey Methods

The purposes of the geophysical survey at the PRS 33-008(c) were

- to locate and assess any shallow geophysical anomalies that might indicate the presence of a landfill at the main culvert area and in the north and south trenches, and
- to assess the lateral extent of buried objects and debris in each of the three possible landfills.

EM data were obtained at 5-foot increments along north-south traverses spaced 10 feet apart. Data were obtained from all accessible areas within the field area. ICF KE personnel set these 5-foot interval grids using a surveyor's tape and surveyed stakes from the 100-foot grid system. The TDMD data were obtained at 2-foot increments

along north-south traverses spaced 5 feet apart. Data were obtained from all accessible areas within the field area. Due to the density of the grid, interference from the security fenceposts could not be avoided.

3.3.2 33-008(c)—Results

Landfill Area

The results of the geophysical surveys of 33-008(c) are illustrated in Figures 5 and 6. The data from the TDMD survey indicate that buried metal is relatively shallow (approximately 2 feet deep). This is supported by the numerous semi-buried and exposed debris within the area.

The EM method is commonly used for the detection and delineation of buried landfills, trenches, and pits containing all types of wastes. The EM data from 33-008(c) indicate that there is no significant landfill in the area. The only buried materials detected with the geophysical survey are the shallow pieces that were detected with the TDMD survey.

Trenches

The TDMD and the EM data obtained over the mound area at 33-008(c) indicate no geophysical anomolies. The data were very consistent and low in magnitude, which is analogous to background data. No buried objects or debris are expected to occur below those features.

Figure 5. Geophysics Survey at 33-008(c) Main Site, TA-33.

3.3.3 MDA-K Survey Methods

Electrical resistivity is defined as the resistance of a volume of earth material to the flow of electrical current. In general, the resistivity of earth materials is dependent upon grain size, moisture content, composition and other physical and lithologic characteristics of the subsurface materials. Fine-grained materials like clay and silt typically have a lower resistivity than course-grained materials like sand and gravel. The presenc of water greatly lowers the resistivity of fine and course-grained materials, and therefore, earth materials characterized by low resistivities are typically caused by increased moisture or clay materials.

For the geophysical survey at MDA-K, the Rectangular Schlumberger Arrays were used. With these arrays, the current electrodes remain at the same separation, while the inner potential electrodes are moved to a number of locations within a defined area near the center of each array. This provides information on the apparent resistivity of a number of locations at approximately the same depth.

Prior to conducting the resistivity surveys, an extensive grid system was established in the MDA-K area. Five rectangular resistivity arrays were conducted to provide the data coverage required for the investigation. Within each resistivity array, measurements were obtained at an interval of 5-feet along north-south traverses spaced 10 feet apart. During the survey, numerous duplilcate data measurements were obtained to ensure data reliability.

In the survey area, resistivity arrays were conducted as close as possible to the PRS components and the chain-link fence. Each data point was evaluated separately. Data points that had obvious interference by structures within the area were not used to construct the resistivity contour map (Figure 6). Data points obtained near the structures that did not exhibit obvious interference were evaluated according to their consistency with the overall data.

3.3.4 MDA-K Results

The results of the resistivity survey at MDA-K are indicated on Figure 6. The lines in the figure represent the contours of adjusted apparent resistivity. Data from all three surveys (1993, 1995, and 1996) were contoured onto the map. Results indicate that the low resistivity anomaly thought to be characterized by high tritium

concentrations at the borehole location 33-1188 is continuous and extends westward through the field area. The anomoly trends directly beneath Sump 33-133 and continues westward. Resistivity measurements were not obtained closer to the chain link fence because of known interference from the fence or subsurface structures near the fence.

A second anomaly of similar magnitude was resolved in the southwestern section of the field area near Sump 33-134. This anomaly does not intersect the sump, however, appears to intersect the sump outfall. The trend of the anomaly could be sub-parallel to the continuous anomaly that extends eastward from Sump 33-133 however not enough data was obtained south of the surveyed area to determine if that is the case. One other non-continuous anomaly was observed in the northern section of the field area, and is likely caused by a localized feature.

Another feature, occupied by Borehole 33-0019 was resolved in the 1989 and 1993 resistivity survey data as a relatively low resistivity zone. However, Figure 6 indicates that it is not a continuous feature, and this is supported by samples obtained from the borehole that had low tritium concentrations.

Figure 6. Geophysics Survey at MDA-K Main Site, TA-33.

Section 4.0

4.0 FIELD SAMPLING ACTIVITIES

Field sampling was conducted at East Site, South Site, Main Site and Area 6 from April 1through October 11, 1996. Personnel involved with field sampling activities are listed in Section 4.1, the approach to sampling is discussed in Section 4.2, and field documentation is described in Section 4.3. Environmental sampling (described in Section 4.4) consisted of the following:

- surface soil sampling
- shallow hand auger sampling
- shallow borehole sampling
- deep borehole abandonment
- waste sampling

Quality control sampling (described in Section 4.7) consisted of field duplicates.

Section 4.8 lists the Main Site and Area 6 samples listed in the RFI Work Plan that were not taken in 1996.

4.1 Field Team Members

The sampling team(s) consisted of the following field team members:

Field Team Member	Role(s)	Organization
Lynn Kidman	Field Team Manager	ICF KE
Kristi Beguin	Field Team Leader (FTL), Radiological screening personnel (RSP)	ICF KE
Linda Fluk	Alternate FTL, RSP	ICF KE
Peter Gram	Alternate FTL, RSP	ICF KE
Dave Dixson	Site Safety Officer, RSP	MK
Ken Hansel	Sampler, RSP	ICF KE
Elmer Alcon	Sampler	ICF KE
Michael George	Sampler	CST-18
Mark Everett	Sampler	GG
Marty Peifer	Radiological Control Technician	ESH-1

The field team members present during any given day are listed in the the field log notebook presented in Appendix 17.

4.2 Sampling Approach

Most of the 1996 field sampling at TA-33 was conducted with one sampling team typically consisting of the following members:

- a field team leader (FTL)
- a site safety officer (SSO)
- a sampler to take field notes and label the sample
- an RSP to check the workspace with radiation monitoring equipment
- a sampler to physically take the environmental sample

Before each sample was taken, the RSP and/or the SSO checked the undisturbed sample location for the presence of above-background levels of radioactivity and volatile organic compounds (VOC). If VOCs or radioactivity above the action levels were detected, the site was evacuated, the appropriate contacts were made, and sampling procedures for that site were re-evaluated. If VOCs or elevated levels of radioactivity were not detected the samplers then proceeded to collect the sample, document weather and site conditions, take photos where appropriate, and document the environmental sample.

All samples were cooled with ice packs in portable ice chests as soon as possible after sample collection. Samples collected in the morning and mid-afternoon were submitted to the Laboratory's sample management organization (SMO) on the day of collection. Samples collected in the late afternoon were maintained in a locked freezer at the site and submitted to the SMO on the following morning.

4.3 Field Documentation

The Laboratory Standard Operating Procedures (SOP) were used for all field documentation and sampling activities. These SOPs are listed in Exhibit 3. Field documentation was carried out conforming to LANL-ER-SOP-1.04, Sample Control and Field Documentation (LANL 1996b). Documentation of 1996 sampling activities at TA-33 provides the necessary evidence to ensure and defend the quality of data derived from the environmental samples. This documentation includes field notes, Sample Collection Logs, and Chain of Custody forms.

Field notes were recorded in a field notebook during the November through December 1995, and the April through October 1996 sampling activities. The field log notebooks are presented in Appendix 17. The field notes include descriptions of:

- field personnel present during each day
- general field conditions
- sampling locations and PRS #s
- sampling equipment
- monitoring results
- deviations from the work plans
- modes of field operations
- other pertinent observations

Sample Collection Logs were completed for each sample and are presented in Appendix 1. Information recorded on the log forms include

- date and time of collection
- sample identification, location, and type
- containers used
- depth of sample
- field monitoring results
- weather conditions at the time of sample collection

Chain of Custody/Request for Analysis forms were completed at the time of sampling to identify and document those personnel responsible for safeguarding the integrity of the samples. These forms provide a record of sample collection and transfer between field personnel and personnel at the Laboratory's sample management organization. The Chain of Custody/Request for Analysis forms are presented in Appendix 2.

4.4 Environmental Samples

Phase I and II environmental samples taken during the 1996 field sampling activities at TA-33 conformed to the RFI Work Plan except as noted in Section 4.8. The following types of environmental samples were taken:

- Surface Samples (Section 4.4.1)
- Sub-Surface Samples (Section 4.4.2)
- Borehole Samples (Section 4.4.3)

- Screening Samples (Section 4.4.4)

Detailed descriptions of samples taken for each sampling day during the 1996 sampling activity are presented in Appendix 1. Exhibit 1 presents a summary of the 1996 samples.

Photographs were taken during the 1996 field sampling activities. Photos referenced in this report are compiled in Appendix 18 with a brief description of each photo.

4.4.1 Surface Sampling

All surface sample collection activities at TA-33 during 1996 conformed to LANL-ER-SOP-06.09, Spade and Scoop Method for Collection of Soil Samples (LANL 1992b). Surface soil samples are defined in the RFI Work Plan as samples taken from the surface to a depth of 6 inches. Surface soil samples were taken to this depth and within a diameter of approximately 4-8 inches. Soil was collected from each sample location using a dedicated stainless steel spoon. The soil was placed in a stainless steel bowl and homogenized by mixing with the stainless steel spoon. This method was used to collect 273 samples during the 1996 sampling activity (Exhibit 1).

Surface samples were collected at the following localized areas at TA-33:

- Shot Chamber at PRS 33-003(b)
- Drum storage areas at PRS 33-013
- General storage area at PRS 33-011d
- Shot Pad at PRS 33-006(a)
- Transformer pad at PRS C-33-001 and C-33-002
- Drainage at PRS 33-017
- Operational release at PRS 33-017
- Surface disposal area at PRS 33-008(c)

4.4.1.1 East Site Surface Sampling

Surface samples were collected from the following localized areas at East Site:

- Shot pad 33-003(b)
- Transformer vault C-33-002

Nine 33-003(b) surface samples were collected to determine if contaminants, especially PCBs, existed at distances up to 200 feet from the elevator shaft, TA-33-6.

All samples were screened for PCBs using the PCB D-Tech™ soil test kits. According to the RFI Sampling and Analysis Plan (SAP) only those samples with screening results greater than 1 mg/kg were to be submitted to the analytical laboratory. No surface samples collected from 33-003(b) had screening results above 1 mg/kg, and therefore no samples were submitted to the anlytical laboratory.

Nine surface soil samples were collected from Area of Concern C-33-002, a transformer vault at bunker TA-33-87, to determine if PCBs were present on the concrete pad, as well as into the drainage adjacent to the bunker. Samples were collected from atop a concrete pad adjacent to the bunker, as well as from the drainage channel leading east from the concrete pad. Samples were collected to bias analytical samples to field screening results. PCB screening was conducted using the PCB D-Tech™ soil test kits. Seven of the nine samples collected had field screening results of 1 mg/kg PCBs or greater. Four of the nine were submitted for laboratory analysis. These samples had field screening results greater than 1 mg/kg PCBs. Field screening and laboratory analytical results are presented in Exhibit 5.

4.4.1.2 South Site Surface Sampling

Surface soil samples were collected from operational release 33-006(a) at South Site:

A Phase II resampling plan was proposed for PRS 33-006(a) because high explosive (HE) results from samples collected in1994 were compromised by missed holding times. A limited resampling effort was reccommended to verify the assessment that HE is not a concern at South Site. Surface soil samples were collected for HE resampling at eight sample locations. The table below lists the eight Location IDs and the Sample IDs from the1994 and 1996 sample campaigns:

Location ID	1994 Sample ID	1996 Sample ID
33-1360	AAA9741	0333-96-0585
33-1365	AAA9746	0333-96-0589
33-1366	AAA9747	0333-96-0590
33-1351	AAA9811	0333-96-0591
33-1353	AAA9813	0333-96-0592
33-1324	AAA9782	0333-96-0587
33-1402	AAA9761	0333-96-0586
33-1446	AAA9759	0333-96-0588

4.4.1.2 Main Site Surface Sampling

Surface soil samples were collected from the following localized areas within Main Site:

- surface disposal area 33-008(c)
- general storage area 33-011(d)
- former storage area 33-013
- operational release 33-017
- transformer pad C-33-001

Thirteen surface soil samples were collected from PRS 33-008(c). One sample collected from location 33-1375, (North Trench) was biased to XRF screening data. Another sample collected from location 33-1680, had elevated beta/gamma radioactivity readings of 800 cpm on the ground surface. All other surface soil samples were within background limits for metal concentrations and radioactivity. XRF screening data is presented in Appendix 6. Radioactivity screening results are documented on the sample collection logs, presented in Appendix 1.

Phase II surface sampling at the 33-011(d) General Storage Area consisted of collecting seven surface soil samples from the soil directly beneath the asphalt parking area. Samples were collected to further determine lead and uranium concentrations in the soil beneath the asphalt. The asphalt was broken up during the sampling using an electric jack-hammer. Above-background radiation levels were discovered during the radiation survey at only one location. Radioactivity at location 33-1570 was 27,120 cpm with the sodium idodide detector. A surface and sub-surface sample were collected from the area of elevated radioactivity. The area of radioactivity was discovered during the radiation survey conducted in April, 1996 (Section 3.2).

Phase II sampling at 33-013 was conducted to further determine the level and extent of inorganic contamination. A total of thirteen surface soil samples were collected from this PRS. Nine samples were randomly selected, and four were biased to XRF screening results. The biased samples were selected based on the criteria outline in the SAP for 33-013. Radioactivity was at background for all of the samples collected. XRF screening data is presented in Appendix 6. Radioactivity screening results are documented on the sample collection logs, presented in Appendix 1.

Phase II sampling at PRS 33-017 was conducted to further determine the levels and extent of polyaromatic hydrocarbons and PCB contamination east of building TA-33-39. Ten biased surface soil samples were analyzed for semi-volatile organic

compounds (SVOC). Eight randomly located surface soil samples were collected from the slope east of TA-33-39 and were submitted to an off-site laboratory for SVOC analysis. Fifteen surface soil samples were collected for PCB screening and of these, seven were submitted to an off-site laboratory for PCB analysis, based upon screening levels above 1 mg/kg PCBs

Phase I sampling at Area of Concern (AOC) C-33-001, a transformer pad adjacent to building TA-33-114, was conducted to determine the level and extent of PCB contamination. Four of the nine samples collected from C-33-001 were submitted for laboratory analysis based upon PCB screening results. Samples submitted for analysis had field screening results greater than 1 mg/kg PCBs. Exhibit 5 shows the PCB screening and analytical laboratory results.

4.4.2 Shallow Hand Auger Sampling

All shallow hand auger sample collection activities at the Main Site during 1996 conformed to the procedures described in LANL-ER-SOP-06.10, Hand Auger and Thin-Wall Tube Sampler (LANL 1992d). Subsurface soil samples were recovered from depths up to 6 feet using a stainless steel hand-held auger that was manually driven into the soil . The soil or sediment was removed from the auger, placed into a stainless steel bowl, and homogenized with a stainless steel spoon. Five samples were collected from PRS 33-008(c) using this method during the 1996 sampling campaign.

4.4.3 Borehole Sampling

All borehole drilling activities at TA-33 during 1996 conformed to LANL-ER-SOP-04.01, Drilling Methods and Drilling Site Management (LANL 1992e).

Borehole drilling was performed by Stewart Brothers Drilling Company with the following equipment:

- C.M.E. 750 Auger Rig
- 4.25-inch-inner-diameter (I.D.) heavy-duty augers and bit
- Stainless steel split-spoon samplers, 2.5-feet by 4-inches

Samples were collected from the borehole using a stainless steel split-spoon sampler according to LANL-ER-SOP-06.24, Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers (LANL 1996c). The split-spoon samplers were monitored for

tritium, radiation and VOCs immediately after opening (see Sections 5.0 and 6.0). The core material was then removed from the split-spoon sampler and placed into a stainless steel bowl. Samples that were to be analyzed for tritium and VOCs were immediately placed into 125-ml amber glass sample containers with a septum lid. The remaining material was broken up, mixed with a stainless steel spoon, and placed into the appropriate sample containers.

Drill cuttings generated from the drilling activities were placed into small piles around the borehole. After sampling was completed at each borehole, these cuttings were returned to the borehole to the approximate depths from which they were generated. Bentonite was placed into boreholes if there was not enough cuttings to backfill the hole completely.

Borehole drilling was conducted at the following sites:

- Sumps at PRS 33-002(b) and 33-002(c)
- Septic tank at PRS 33-002(a)
- Drainfield at PRS 33-002(a)
- Landfills at PRSs 33-008(a), 33-008(b), 33-008(c), and 33-001(a-e) (MDA-E)
- Shot Chamber at PRS 33-003(b)

The following sections describe the drilling and sampling methods for each PRS.

4.4.3.1 East Site Drilling

Drilling was conducted at two East Site PRSs:

- 33-008(b)
- 33-003(b).

Investigation at 33-008(b) was a Phase I RFI activity, while the investigation at 33-003(b) was a Phase II sampling effort. Both investigations were conducted to gather additional data on the subsurface components of the PRSs.

The RFI Work Plan proposed trenching through the landfill at PRS 33-008(b) to determine if the contents included hazardous material. Photos of the landfill indicated that massive items (e.g., telephone poles, railroad ties, gun mounts) of debris were

tightly packed into the landfill . Based upon the information provided in these photos, the revised SAP proposed collecting subsurface core samples with an auger rig.

A total of six boreholes were drilled into the 33-008(b) landfill, and eighteen analytical samples were collected. Borehole locations were randomly selected by creating a stratified grid consisting of six cells, with one borehole randomly located within each cell. The work plan stated that six holes would be drilled into the landfill, with four samples collected from each hole. Of the six boreholes drilled, four samples were collected from all except two, where only three samples were collected due to the shallow tuff (Exhibit 2 table of depths and site IDs). The depth to tuff varied between 1.0 to 4.5 feet depth throughout the landfill.

Debris encountered within the landfill included partially to almost fully decomposed timbers (most with an obvious creosote odor) and large nuts and bolts (4-5 inches in diameter) that were likely to be fromthe former gun mounts at the firing sites. No other debris was observed in the sample cores, although there was an abundance of non-native soils (sand, fill material, humus and micaceous clays) throughout.

Drilling at PRS 33-003(b), an underground experimental chamber TA-33-6, was conducted to provide further data for risk assessment and to provide information on the mobility of buried contaminants. The investigation was necessary to determine if PCBs remain in the subsurface and surface soils, as the components used during experimental tests may have contained PCBs.

Two boreholes were drilled adjacent to the elevator shaft that provided access to the chamber. The RFI Workplan required drilling to total depths of 15 feet. One borehole, 33-1745, is located approximately three feet north of the shaft, and the second borehole, 33-1746, is approximately four feet east of the shaft.

Soil was screened using the D-Tech® PCB soil test at one-foot intervals. All screening results from soil within borehole 33-1745 were below 0.5 mg/kg PCBs, which was below the action level of 1 mg/kg. Therefore samples were not biased to field screening results, and were collected at default five-foot depth intervals (4-5 ft, 9-10 ft, and 14-15 ft depths).

Screening results from soil within borehole 33-1746 were also below the action level of 1 mg/kg. The first two samples were collected at approximately 5-foot intervals (0 to 1.5 ft, 4 to 5 ft). The third sample was biased to the highest PCB screening resultwithin the borehole (less than 1 mg/kg PCBs). (The depth of the final sample was 10 to 11.5 ft depth.)

While attempting to drill to 15 feet total depth in borehole 33-1746, a large cavity was observed through the borehole. The drillers got no recovery from the 12.5 to 17.5 feet. The rig was adjusted to perform hammer-drilling down to 20 feet depth. One foot of recovery was obtained during hammer drilling, and the soil consisted of engineering fill sands and silts. The PCB screening results of this soilwere below detection.

It was apparent that the borehole was atop a large cavity in the ground, as the cuttings were backfilled into a large void. The cavity appeared to run towards the southeast, directly towards the second experimental chamber PRS 33-003(a) and was perhaps a connecting tunnel between the two chambers. Using biodegradable poly-jute® matting, the drillers were able to plug the bottom of the hole. A total of 16 bags of medium-course Enviroplug® bentonite was used to fill the borehole to the ground surface.

4.4.3.2 South Site Drilling

Drilling was conducted at two landfills at South Site:

- 33-008(a)
- 33-001(a-e), MDA-E

Three samples were collected from the tow of landfill 33-008(a) as part of the 1994 Phase I RFI activities at TA-33. MDA-E was investigated in 1989, but was not part of the RFI activities. Further investigation was required by EPA to determine if hazardous and/or radioactive constituents were migrating from the trenches into the tuff.

The sampling plan for 33-008(a) required drilling 4 boreholes at random locations within a stratified grid containing four cells, with one borehole in each cell. Four samples were collected from each borehole, for a total of 16 analytical samples from the landfill. One sample was collected from the soil at the bottom of the landfill

immediately above tuff, one sample was collected from 12 to 24 inches into the tuff, and two samples were biased to soil surrounding debris.

Debris including chain-link fencing, wire, and timbers , is present on the surface of the landfill. Timbers (some with obvious creosote odor) were recovered in the split-spoon sampler, as well as small metal pieces. Tuff varied in depth from 3.5 feet to 10 feet in depth.

The samplingobjectives for MDA-E were to see if constituents have been released to the tuff surrounding the landfill, and to determine if the levels and extent of contamination observed from the 1989 and the 1996 sampling campaigns were adequate to compare remedial action alternatives.

A total of two boreholes were drilled within the fenced area at the MDA-E landfill. The locations of the boreholes were selected based on the 1989 Weston geophysical survey (Appendix 10), and were chosen to avoid the trenches that contain hazardous debris. (However, borehole locations were within ten feet of observable trenches.) Each borehole was drilled to 40 feet total depth, and samples were collected within 10-foot intervals for a total of 4 samples per borehole. Each split-spoon interval pulled from the borehole was screened for radioactivity and VOCs. No elevated radioactivity or organics were detected or used to bias sample locations.

4.4.3.3 Main Site Drilling

Drilling was conducted at the following PRSs at Main Site:

- Sumps at PRS 33-002(b) and 33-002(c)
- Septic tank at PRS 33-002(a)
- Drainfield at PRS 33-002(a)
- Landfill at PRS 33-008(c)

Drilling at MDA-K

Stewart Brothers Drilling Company drilled four boreholes at MDA-K between May 28, 1996 and June 19, 1996. Equipment used for the drilling was a CME 750 hollow stem auger drill rig with 4.25-in.- inner diameter (I.D.) heavy-duty augers and bit and stainless steel split-spoon samplers, 4-ft by 3.25-in.

Previous investigations conducted at MDA-K in 1993 indicated that tritium is

present within and adjacent to sumps at PRSs 33-002(b) and 33-002(c), respectively. Tritium was also detected in fluid and sludge from the septic tank at PRS 33-002(a). Refer to RFI Report for MDA-K (September, 1995) for further details on the previous investigations and results.

A geophysics investigation conducted in 1996 indicated an anomaly within MDA-K between the sump at PRS 33-002(c) and a tritium contaminated deep borehole (drilled during a 1993 investigation). This anomaly was thought to represent a fracture system which could serve as a pathway for the movement of tritium.

The objectives of drilling at MDA-K in this field season were to better define a source of tritium contamination, to bound the vertical extent of tritium contamination, and to determine the presence of contaminants other than tritium. Four borehole locations were based on the previous investigations mentioned above and are as follows:

- sump at PRS 33-002(b) (borehole 33-1328);
- sump at PRS 33-002(c) (borehole 33-1697);
- adjacent to septic tank at PRS 33-002(a) (borehole 33-1696); and
- drainfield at PRS 33-002(a) (borehole 33-1652).

Borehole 33-1328 was drilled in the sump to a total depth of 120 ft. This is the same location as was hand augured in the 1993 investigation. The material in the sump is a sandy soil with cobbles and tuff. Pieces of clay pipe were encountered at approximately 2 ft depth. The bottom of the sump was encountered at 9 ft 3 in. Tritium concentrations within the sump were as high as 24,852 pCi/g. The highest tritium concentration in the hole (104,065 pCi/g) was just below the bottom of the sump at a depth of 9 ft 6 in. Concentrations decreased at depths greater than 60 ft and remained at approximately 100 pCi/g to the bottom of the hole.

Borehole 33-1697 was drilled in the sump to a total depth of 65 ft. Note that this is not the same location that was hand augured in the 1993 investigation. The material in the sump is a sandy fill with gravel and some cobbles. Pieces of clay pipe were encountered at approximately 3.5 ft depth. The bottom of the sump was encountered at 8 ft 3 in. Tritium concentrations within the sump were as high as 370 pCi/g. The highest tritium concentration in the hole (144 pCi/g) was at a depth of 19 ft 6 in. Concentrations decreased at depths

greater than 30 ft to approximately 10 pCi/g at total depth.

Borehole 33-1696 was drilled adjacent to the septic tank at PRS 33-002(a) to a total depth of 30 ft. Tritium concentrations in the hole ranged from as 6 pCi/g at 3 ft to 1 pCi/g at 13 ft.

Borehole 33-1652 was drilled geographically between sump 33-002(b) (which contained the highest tritium activities) and a tritium contaminated deep borehole 33-1231. In addition, the borehole is located in the geophysical anomaly between sump 33-002(c) and borehole 33-1231 mentioned above. The borehole was drilled to a total depth of 120 ft. Tritium concentrations ranged from 2 pCi/g at 2 ft to 0.8 pCi/g at 118 ft.

Exhibit 2 presents the depths, tritium concentrations and lithologic units for each sample. The tritium concentrations do not correspond with geological horizens or structures within lithologic units.

Figures 7 and 8 present the lithologic logs for the four boreholes. Refer to Figure 9 for an overall schematic of the boreholes, including tritium concentrations per depths. The highest concentrations of tritium at MDA-K encountered during this and previous field investigations were detected in sump 33-002(b) and the deep borehole 33-1231. Tritium was not detected above levels of concern at the borehole between these locations (33-1652).

Sampling

Continuous cores were collected from the stainless steel split-spoon samplers. The split-spoon samplers were brought to the sampling table and monitored for radiation using an ESP 1 with an HP-260 pancake probe and a Overhoff 394-C tritium detector. General lithology and structural features were logged by the field team. These borehole logs, including information such as core recovery and tritium concentrations are presented in Figures 7 and 8 and Appendix 7. Photographs were taken of all the cores and are presented in Appendix 18. After the cores weresampled, logged and photographed, they were placed back into the hole.

Samples were collected from the boreholes at five foot intervalswere analyzed at the CST mobile radiological laboratory for quick turn-around tritium and

moisture analyses.

Off-site laboratory samples were collected at 5-ft intervals for the first 15 ft of the hole and analyzed for radionuclides, VOC, SVOC, and inorganics. From this depth to the bottom of the hole, samples were collected at 15-ft intervals and analyzed for tritium.

The selection of sample material from the cores was based on professional judgment in order to maximize the likelihood of detecting potential contaminants. This selection was based on field screening results and geological features such as altered fractures or permeable material. Radiological and VOC screening of the cores did not reveal elevated readings from which to bias selection of sample material from the cores.

Drilling in each borehole continued to a predetermined minimum depth and until three consecutive samples exhibited activities below tritium SALs based on the mobile radiological laboratory results.

Borehole 33-1652—PRS 33-002(a)

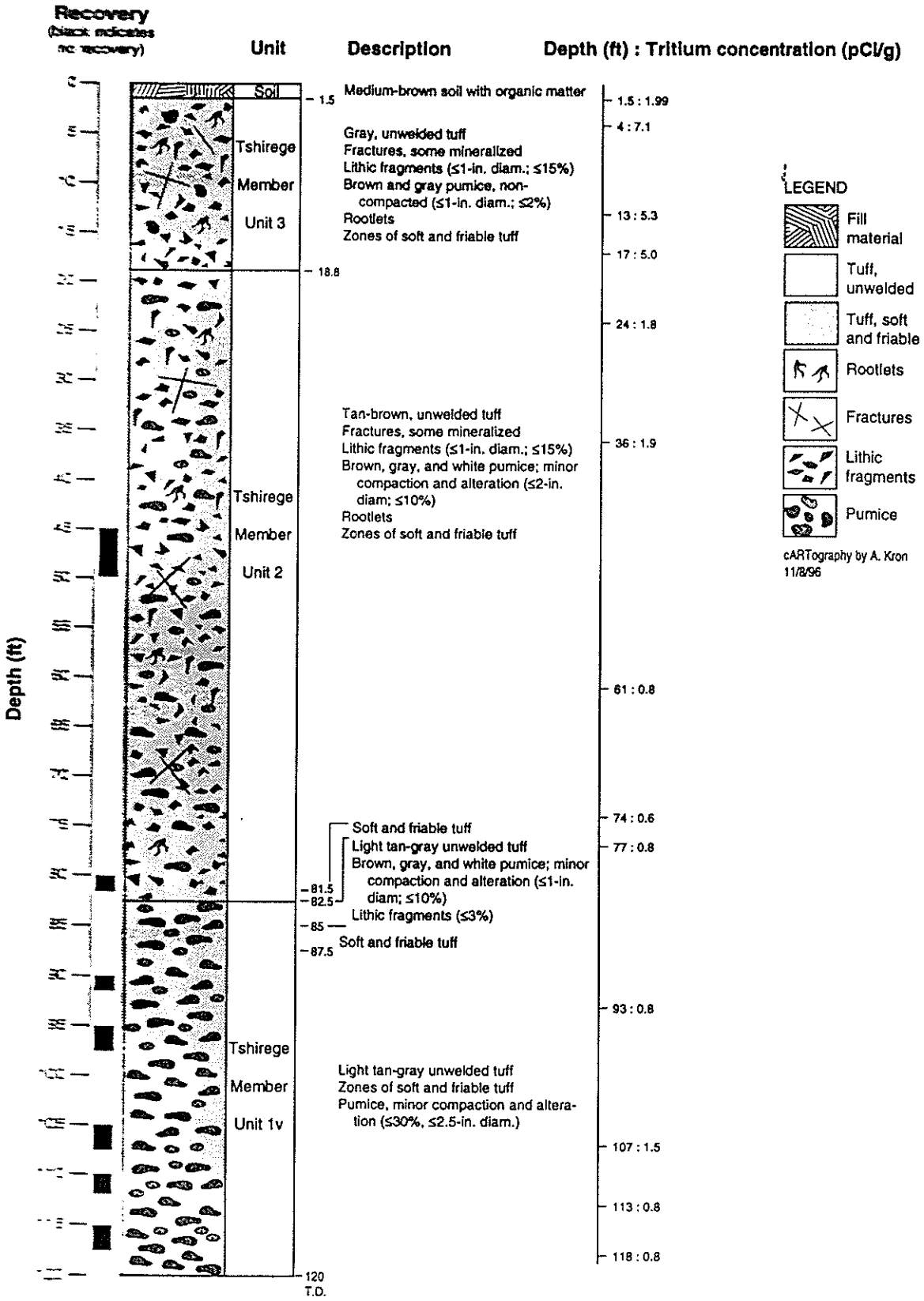
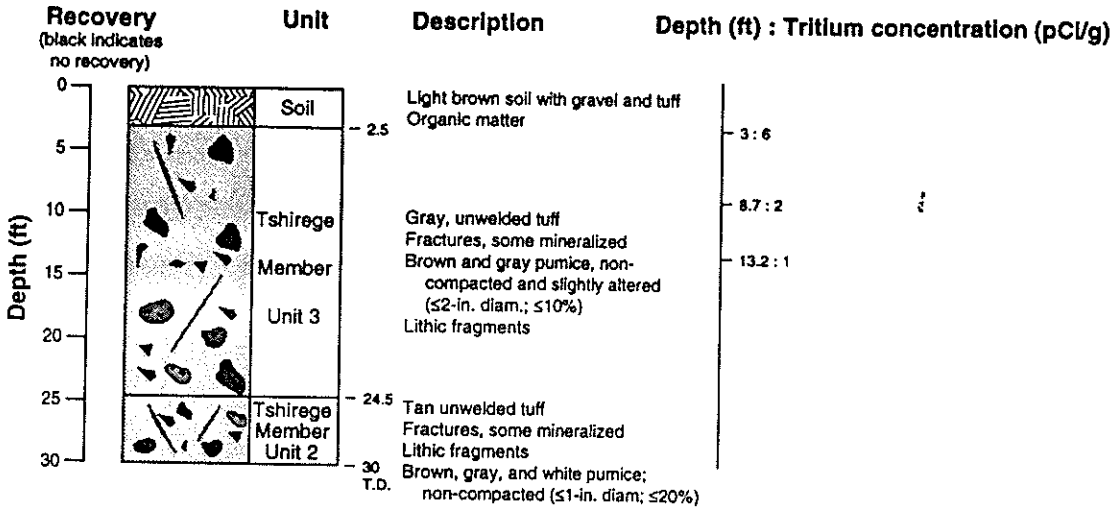


Figure 7. Geologic Log of Borehole 33-1652, MDA-K.

Borehole 33-1541—PRS 33-002(a), Septic Tank



Borehole 33-1542—PRS 33-002(c), Sump

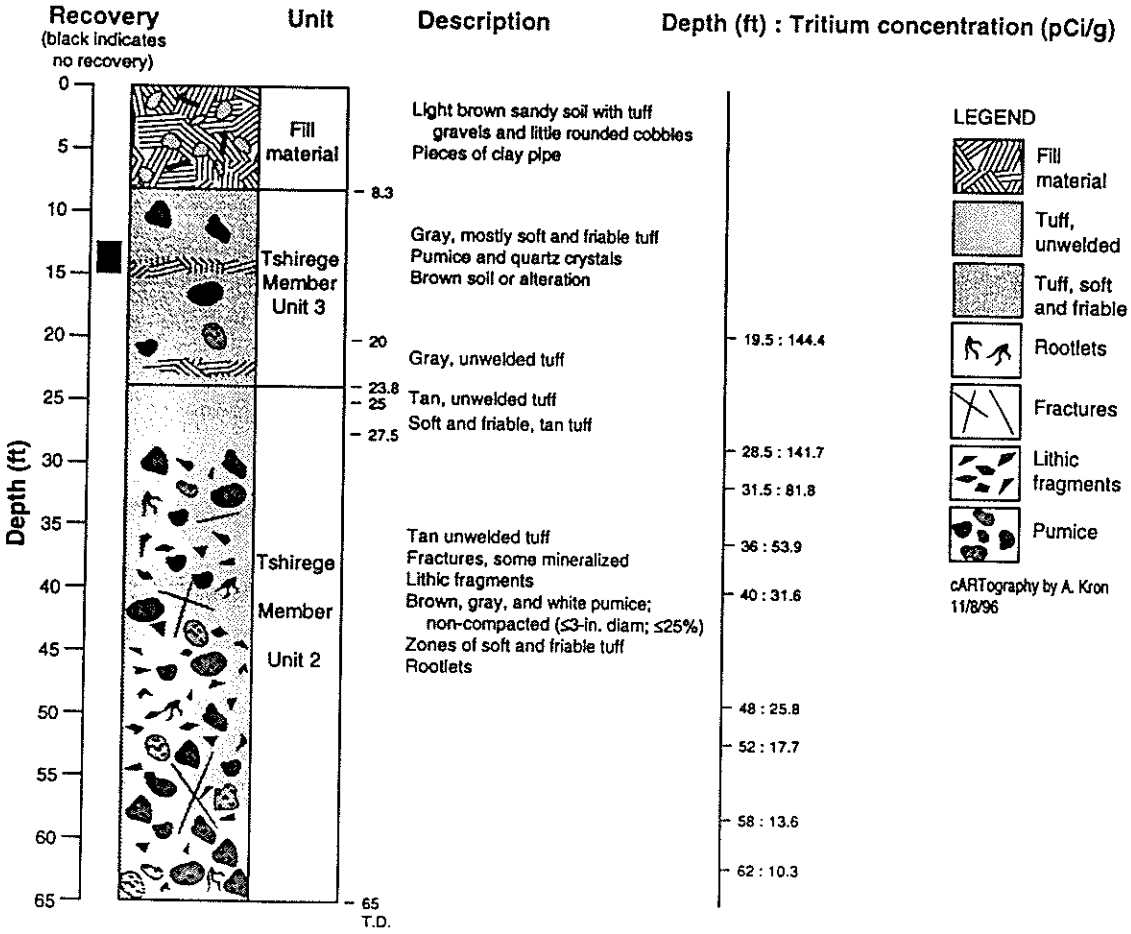


Figure 8. Geologic Log of Boreholes 33-1696 and 33-1697, MDA-K.

Borehole 33-1328—PRS 33-002(b), Sump

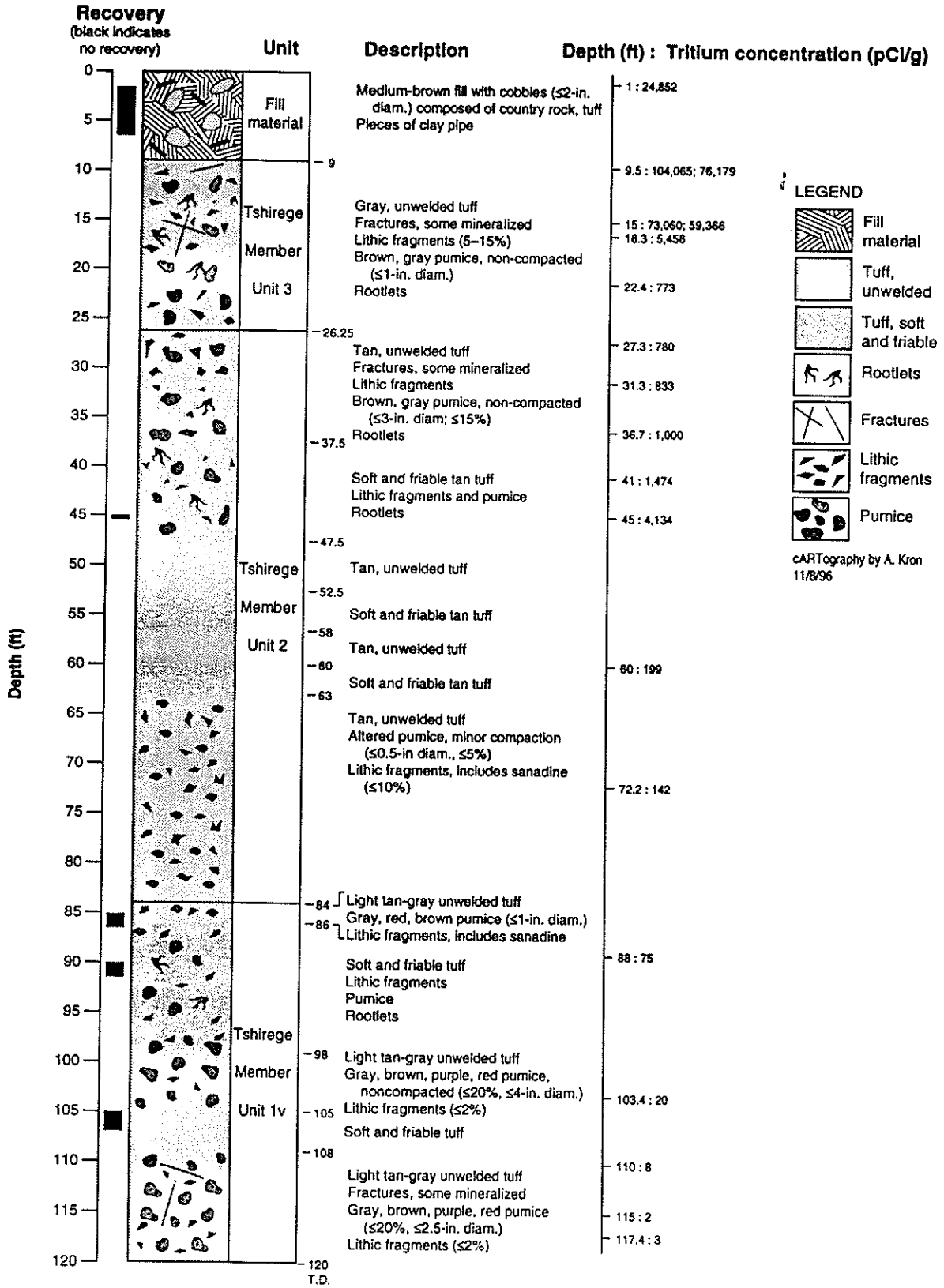


Figure 9. Borehole Schematic of MDA-K Boreholes.

Drilling at 33-008(c)

In May 1996, 33-008(c) was established as a new PRS due to the discovery of the disposal area. A Phase I sampling and analysis plan was designed to determine more about the nature, volume, and location of buried material (if present) and to find out if contaminants are migrating from the area. A geophysical survey was conducted to locate buried objects to bias the borehole sampling locations (Appendix 10). Three distinct surface features make up PRS 33-008(c): a trench, located 250 ft north of the main channel; the main culvert area where debris was observed eroding from the channel banks; and the south mound, located approximately 75 ft south of the main channel. Drilling was conducted at the south mound area and the culvert area. Due to worker health and safety concerns, drilling was conducted remotely using the

A total of three boreholes were drilled at the South Mound, and four boreholes were drilled at the main culvert area. For all boreholes, cores were screened at 1-ft intervals for beta/gamma radioactivity, VOCs, and metals. If no elevated radioactivity , VOCs, or metals were detected, then screening was not used to bias the sample locations. A total of three boreholes were drilled at the south mound. Evidence from the geophysics survey, drilling, and sampling indicated that all material was native, and there was no indication of subsurface debris buried within the mound. Based on this information, the field unit members decided to not drill the final borehole at the South mound area, and to not submit the subsurface samples for laboratory analysis. Surface samples were collected from the all the south mound locations and submitted for laboratory analysis.

A total of two boreholes were drilled using a hollow-stem auger, and two holes were hand augered at the main culvert area. Boreholes drilled using the remote hollow-stem auger rig were 33-1679 and 33-1680. Samples from locations 33-1681 and 33-1682 were collected using a hand auger. No elevated radioactivity or inorganics were detected at location 33-1679. Elevated radioactivity was detected at borehole location 33-1680. Elevated beta/gamma reading of 750 cpm were detected, as discussed in section 4.4.2. Abundant debris, some with obvious copper staining was present at this same location. XRF readings ranged up to 3700mg/kg copper, and 1212 mg/kg lead at 1-ft depth. No elevated XRF readings or radioactivity were detected two feet into tuff at this same location.

A sweet perfumey-type smell was detected within the immediate area at location 33-1681. Abundant debris (broken glass, cables, metals, etc.) was present on the soil surface, to approximately 2-ft depth. Lead was detected at 655 mg/kg and copper was detected at 4070 mg/kg in the 6" to 1'3" sample. Below three feet, no inorganics were detected. No elevated radioactivity was detected at this location. This hole was augered down to six feet depth because the samplers thought the material was clay. This material was actually a weathered tuff. The soil/tuff interface was at three feet depth.

Location 33-1682 was re-randomized to fall into the area of concern. This point fell into the main drainage area, just south of the actual drainage channel. This location was augered down to 24 inches depth. No elevated radioactivity was detected at this location. A small piece of heavy metal was found within the 1-2 ft sample. XRF results were slightly elevated at this location with mercury at 78mg/kg, and lead at 90 mg/kg in the surface sample. Results dropped to background at the two feet into tuff sample.

4.6 Quality Control Samples

Field quality-control samples were collected during all 1996 field sampling activities at TA-33 to provide the means of assessing the quality of the data that resulted from these activities. Field quality-control samples were collected during the investigation as specified and defined in the Laboratory's ER Qulaity Assurance Project Plan Requirements for Sampling and Analysis Plans (LANL 1996). All quality control samples were collected at a minimum frequency of 1 per 20 samples (the frequency was higher if less than 20 samples were collected per sampling period). Quality control samples are presented in Exhibit 5. Field quality-control samples consisted of field duplicates.

Field duplicate samples are analyzed to check for both sampling and laboratory analytical reproducibility. The collection procedure for duplicate samples varied slightly from the environmental sample procedure in that more material was placed into the stainless steel sampling bowl before homogenizing the material. This practice ensured that enough homogenized material was available for both samples before the samples were removed from the sampling bowl. The off-site and the mobile radiation laboratories were not told which samples were duplicates.

4.7 Deviations From the Sampling Plans

Some of the samples listed in the RFI Work Plan for Area 6 were not collected during the 1996 field sampling activities. Surface soil, shallow hand auger, and PCB screening samples were not collected from PRS 33-009 at Area 6. Scheduling constraints kept the field crews from collecting these samples. Sampling was also not conducted at 33-004(k) drainline because the drainline could not be located.

Deviations also occurred at the following PRSs:

- 33-008(a)
- 33-008(b)
- 33-008(c)

For both 33-008(a &b) the SAP stated that samples of debris would be collected during the drilling activities. Debris samples were not collected from either landfill. Samples were collected from soil surrounding debris. The field unit members used professional judgement in choosing soil surrounding debris rather than the debris.

The 33-008(c) SAP called for drilling at the eight locations, but due to accessibility constraints with the drill rig, the shallow hand auger sampling was required to obtain samples from two locations designated for borehole method was required to obtain these samples. The two locations sampled with the hand auger are 33-1681 and 33-1682.

4.8 VCAs, IAs, and BMPs Conducted in 1996

This section of the report summarizes activities and practices, other than Phase I and II investigations, which were conducted at TA-33 during 1996. VCAs, IAs, and BMPs are discussed in Sections 4.8.1, 4.8.2, and 4.8.3, respectively.

4.8.1 Voluntary Corrective Actions

VCAs were conducted at the following PRSs during the 1996 fiscal year:

- 33-007(c) SGS remediation of berm, separation of uranium from soil.
- 33-010(a) Removal of debris from canyon-side disposal area.
- 33-010(d) Removal of debris from canyon-side disposal area
- 33-010(g) Removal of debris from canyon-side disposal area
- 33-011(b) Removal of debris from former surface storage area
- 33-010(b) Removal of "metal ball" from canyon-side disposal area.

PRS 33-007(c)

The VCA at PRS 33-007(c) was a pilot treatment project to remediate uranium contaminated soil at a weapons testing site at LANL. The work was conducted from April 1 through May 15, 1996. The treatment utilized two methods. The Segmented Gate System (SGS) developed by Thermo Nuclean assayed and sorted uranium contaminated soil to contaminated and clean components. The Containerized Vat Leach (CVL) system developed by LANL leached out the uranium from the contaminated component. The SGS successfully reduced the volume of contaminated soil by 97%. The available results for the CVL indicate a reduction of uranium contamination in soil ranging from 67% to 97%. Fifty percent of the soil run through CVL met the release criteria and thus could be returned to the site. A report or paper summarizing the results of the pilot study is forthcomming.

During the pilot study at 33-007(c), 56 metal projectiles were uncovered from a berm on the south side of building TA-33-16. The projectiles were characterized in terms of physical properties, radiological properties, and chemical and structural properties. The results from the characterization are presented in Appendix 20.

PRSs 33-010(a), 33-010(d), 33-010(g), and 33-011(b)

VCA/EC activities entailed characterizing, segregating, and removing debris from canyon side disposal areas at PRSs 33-010(a), 33-010(d), and 33-010(g) and a general storage area 33-011(b). The debris was screened in place for radiation using a beta-gamma sodium iodide detector. Best judgement and acceptable knowledge were used to determine the debris that was analyzed for hazardous constituents using a field portable X-ray fluorescence spectrometer. This potential hazardous debris was brought to the CRZ for analysis. Analyzed material was segregated into four categories: hazardous, radioactive, mixed, and nonhazardous- nonradioactive waste. Nonhazardous-nonradioactive industrial waste was further segregated into wood, metal, concrete, and miscellaneous piles for eventual disposal at the industrial landfill. Industrial waste was stored at the PRS in large heavy mil industrial grade storage bags (King® bags) and in piles (for the larger debris). Hazardous waste was stored at the Satellite Storage Area at the support trailer. Radioactive waste was stored at the

Radioactive Material Holding Area at Area 6. Waste profile, transportation, and other applicable paperwork was completed and the waste was transported to the appropriate disposal facility.

Criteria for collection of the debris was detailed as part of the the DQOs. Debris picked up during the VCA met the following criteria:

- debris from industrial processes;
- household debris intermxed with industrial debris;
- debris (such as foam, plastic, bolts, nails, etc.) greater than approximately three inches in diameter;
- debris related to the PRS source (e.g. small pieces of projectiles originating from a separate PRS source such as 33-006a) will not be collected;
- debris which does not consist of wood, timber, or concrete; and
- debris from within the boundary of the PRSs;
- debris outside the boundary of the PRSs (as determined by the FU3 field team members).

In addition debris outside the boundary of the PRS was removed if the debris:

- was generated from the PRS source;
- was located in close proximity; and
- did not create a safety concern to collect.

Waste generated from the PRSs are presented below:

- PRS 33-011(b): 3.5 cubic yards of industrial (non hazardous non radioactive) waste consisted of metal, wood, plastic, and glass. Radioactive waste from site consisted of six pieces of metal ranging up to 115,000 cpm beta/gamma.
- PRS 33-010(a): 5.5 cubic yards of industrial (non hazardous non radioactive) waste consisted of foam, metal, wood, plastic, and glass. Radioactive waste from site consisted of two pieces of metal ranging up to 50,000 cpm beta/gamma. Potentially hazardous waste consisted of two cans of potentially hazardous solvents. The Hazardous Materials (HAZMAT) team came out to the site to test the cans for explosive hazards. The solvents were not explosive and were found not to contain hazardous constituents.
- PRS 33-010(d): 2 cubic yards of industrial (non hazardous non radioactive) waste consisted of metal, wood, plastic, and glass. Radioactive waste from site consisted of one piece of metal above background.

- PRS 33-010(g): 5 cubic yards of industrial (non hazardous non radioactive) waste consists of electrical cable, nails, shrapnel, cable, buckets, foam, metal, wood, plastic, and glass. Radioactive waste from site consists of 85 pieces of metal ranging up to 16,990 cpm beta/gamma and 800 cpm alpha.

PRS 33-010(b)

The VCA was conducted to remove metal turnings, debris, and contaminated soil from a ledge overlooking White Rock Canyon. A crane situated approximately thirty feet from the cliffs edge was used to lift the metal turnings and debris from the ledge. This was accomplished by placing rebar and cable through the pile and attaching this to a sling. The sling was hooked to the crane cable and lifted. The turnings were deposited on an HDPE mat on the mesa top. Following the removal of the turnings (weighing approximately 2,000 pounds), personnel worked on the ledge with shovels and picks and removed larger debris and separated asbestos. This material was put into heavy mil containers with handles and lifted onto the HDPE mat. Soil and small debris was vacuumed from the ledge into 55-gallon drums situated on the mesa top.

In order to characterize all of the material in the large 'mass of turnings', it was manually cut apart into small pieces using metal clippers. Each piece of metal and other debris was screened for radioactivity using hand held instruments and visually inspected for hazardous constituents. If hazardous constituents were suspected, then the material was analyzed using an XRF. The pile was segregated into six catagories for waste disposal purposes. The volumes of each type of waste is as follows:

- industrial (metal) - 10 cubic yards
- industrial (non-metal) - 2 cubic yards
- hazardous - 0
- radioactive - 0.5 cubic yards
- mixed - 0
- asbestos - 0.5 cubic yards

The soil which had been vacuumed into drums was sampled and found to contain hazardous and radioactive constituents. Waste minimization practices were carried out by conducting an approved generator treatment to render the metal constituents into insoluble species. This was accomplished by adding portland cement ($CaCO_3$) to each drum to a total 5 % composition in the soil. The drums were rotated for five minutes to homogenize the soil/lime mixture. Soil samples collected from the treated

soil mixture were found to contain no leachable metals. The resulting soil waste from this treatment process was as follows:

- radioactive soil - 6 cubic yards
- decontamination liquid - 0.6 cubic yards

4.8.2 Interim Actions

IAs were conducted at the following PRSs during the 1996 fiscal year:

- 33-006(a) Shrapnel pick-up
- 33-010(c) Straw bale dams and temporary surface stabilization
- 33-007(b) Straw bale dams and temporary surface stabilization
- 33-007(c) Sand bags and HDPE cap

33-006(a)

The IA conducted at PRS 33-006(a) South Site, TA-33 and Bandelier National Monument reduced potential exposure to debris from implosion experiments conducted at TA-33. Work was carried out in 1996 on September 4, 5, 6, October 8, 9, 10, 11, 15, and November 8, 11. Debris was removed from watercourses within a one-half mile radius around the implosion pad (and two extensions off of the radius) and from Bandelier National Monument. Refer to Appendix 21 for a summary report on the 33-006(a) remediation.

33-010(c), 33-007(b), and 33-007(c)

The IAs conducted at 33-010(c), 33-007(b), and 33-007(c) which typically involved the placement of temporary straw bale dams and/or sand bags as well as site stabilization using poly-jute matting, straw, and sand bags, and HDPE caps., were conducted at the following PRSs:

4.8.3 Best Management Practices

BMPs were conducted at the following PRSs during the 1996 fiscal year:

- 33-008(c) Straw bale dams in drainage channel
- 33-009 Straw bale dams in drainage channels
- 33-010(b) straw bale dams in drainage channel

The BMPs involved the placement of straw bale dams to prevent sedimentation transport in drainage channels.

Photographs of the VCAs, Ias, and BMPs are presented in Appendix x.

5.0 HEALTH AND SAFETY MONITORING DURING FIELD ACTIVITIES

Health and safety monitoring was conducted at TA-33 to protect field workers from suspected or known physical, chemical, and radiological hazards during on-site operations. This section discusses field monitoring for physical and chemical hazards for Phase I and II, VCA, and IA activities. Field monitoring for radiological hazards is discussed in Section 6.0. General heath and safety requirements are described in Section 5.1, direct-reading instrument monitoring is described in Section 5.2, and other personal monitoring is described is Section 5.3.

5.1 Health and Safety Requirements

The SSO was responsible for enforcing all health and safety requirements as stated in the Site-Specific Health and Safety Plan (SSHASP). The complete SSHASP and SSHASP Modifications are located in Appendix 18. The SSO conducted tailgate safety meetings every sampling day. Tailgate Safety Meeting Forms (Appendix 19) document these meetings. The SSO also briefed visitors on health and safety issues, conducted or oversaw health and safety monitoring, and ensured that all health and safety concerns were met.

A task-by-task risk analysis was conducted to identify hazards associated with given tasks. The identified hazards were then evaluated to determine levels of protection needed for field personnel. On the basis of these evaluations, Modified Level D PPE was recommended and used during sampling activities. Modified Level D PPE consisted of

- chemical-resistant boots;
- Reusable cotton coveralls;
- inner and outer chemical-resistant gloves (or one or two pairs of inner gloves, depending on role of sampling team member);
- safety glasses.

Hard hats and hearing protection were used when working within 50 feet of drilling equipment and heavy machinery.

Three work zones were established to assure that hazardous substances were not spread from the potentially contaminated areas:

- The exclusion zone (the contamination area where samples were collected)
- The contamination reduction zone (the decontamination area)
- The support zone (the clean area where administrative and support work was conducted)

The Laboratory's Industrial Hygiene Group (ESH-5) was responsible for overseeing all health and safety issues and conducted several audits during the 1996 sampling activities. ESH-5 and EES-4 were responsible for health and safety issues related to the drilling operations.

5.2 Monitoring With Direct-Reading Instrumentation

Direct reading instruments were used to monitor the work environment of on-site workers. The following instruments and their action levels were used for sampling activities:

Direct-Reading Instrument	Action Level
• HNu photo-ionization detector (PID), Model PI101 with a 10.2 ev probe	• 8.5 ppm.
• MSA oxygen/combustible gas meter	• 22% ≤ O_2 ≥19.5% combustible gas ≥ 10% of lower explosive limit
• MIE Miniram aerosol dust monitor, Model PDM-3	• 5.0 mg/m^3
• Tritium Analyzer	• 5 $\mu Ci/m^3$

5.2.1 Methods

Each instrument was calibrated at the beginning of each work day. The calibration logs are provided in Appendix 19. The Foxboro FID or HNu PID was used to monitor organic vapor concentrations in the breathing zone of the sampler and downwind of sampling activities where VOCs were potential contaminants of concern (PCOC). Monitoring results are documented in the Sample Collection Logs (Appendix 1) and the field notebook (Appendix 17).

The oxygen/combustible gas meter was used continuously at subsurface sample locations and periodically down boreholes. These measurements are documented in the Sample Collection Logs and the field notebook.

The Miniram aerosol dust monitor was used downwind of sampling activities and drilling operations. The instrument was placed in several positions: downwind of the drill rig; on the drill rig; on the vacuum unit; and on the sample collection and logging station table. Readings were taken on a continuous basis. Miniram measurements are documented in the Sample Collection Logs and the field notebook.

The tritium analyzer was used to monitor for tritium vapors. The instrument was placed inside the logging trailer while site workers logged cores and on the sample collection table while site workers sampled and logged cores. It was also used to analyze for tritium concentrations at the drill rig. Measurements from the tritium analyzer are documented in the field notebook.

5.2.2 Results

Organic vapors were not detected with the PID at sample locations or in the breathing zone of field workers.

Miniram particulate readings taken from the drill rig and vacuum system ranged from 0.017 to 0.35 mg/m^3, with a mean of 0.19 mg/m^3. Particulate measurements taken from the sample collection and logging station ranged from 0.0 to 1.81 mg/m^3 with a mean of 0.41 mg/m^3. These readings are well below the action level of 5.0 mg/m^3 for particulates listed in the approved SSHASP.

Results from the tritium analyzer indicated tritium concentrations were above the screening action level of 20 µCi/ m^3 several times during the drilling effort at MDA-K. According to the Radiological Work Permit (RWP) for MDA-K, if the action level was exceeded, personnel must move upwind from the borehole and allow the borehole to vent for 5 to 10 minutes before monitoring the borehole again. Only when the tritium results were below the action level did personnel resume work. Results from borehole 33-1328 ranged from 18 µCi/ m^3 to 100µCi/ m^3 to depths of 100 feet. No tritium was observed beyond 100 feet. At borehole 33-1652, tritium was detected at 45 feet depth. This was the only tritium reading detected with the tritium sniffer, no other readings above background were obtained. At borhole 33-1697, 18 µCi/ m^3

was detected from 40 to 40.5 feet. This was the highest reading obtained from this borehole.

5.3 Personal Monitoring

Personal monitoring was conducted during the 1996 field activities to ensure field personnel were not exposed to harmful or measurable levels of contamination. This monitoring consisted tritium bioassays.

5.3.1 Methods

Site workers potentially exposed to surface or airborne radioactive contamination from on-site activities during sampling activities were given weekly bioassays for tritium.

Section 6.0

Section 7.0

6.0 RADIATION MONITORING DURING SAMPLING ACTIVITIES

Radiation monitoring was conducted by RSPs or the RCT during Phase I and II, VCA, IA, and BMP field sampling activities to protect the health and safety of field team members. Radiation screening at TA-33 consisted of scanning sample locations and soil samples for radiation. Personnel, equipment, and material were also monitored for radiation before leaving the exclusion zone. Surveys were also conducted on equipment and material before release from TA-33. Radiation monitoring for the 1996 sampling event is discussed in Section 6.1.

6.1 Radiation Monitoring

Radiation monitoring was conducted at all sample locations where radioactive constituents were contaminants of known or potential concern. Radiation monitoring was conducted using hand-held ESP-1with a 44-9 pancake probe, an Eberline sodium iodide detector, an Overhoff 394-C tritium sniffer, and an Ludlum 139 alpha detector with a mylar probe.

Radiation monitoring was conducted at the ground surface of sample locations, and along the surface of core obtained from boreholes. All readings were recorded on the sample collection log forms (Appendix 1) or the field log notebook (Appendix 17)

7.0 EQUIPMENT DECONTAMINATION PROCEDURES

Decontamination of non-expendable equipment is a critical part of data quality assurance. All sampling equipment was carefully decontaminated before reuse.

Specific procedures used for the decontamination of the manual sampling equipment, the drilling equipment, and heavy machinery are described in Sections 7.1, 7.2, and7.3, respectively.

7.1 Decontamination of Manual Sampling Equipment

Sampling equipment such as hand augers, chisels, and spoons and bowls were decontaminated before each reuse. Decontamination procedures entailed washing the

equipment in a solution of Alconox™ and water, rinsing in water, and rinsing again in distilled water. As specified in the approved Notice of Intent to Discharge (NOI), decontamination water was poured back onto the PRS from which the samples were collected. The details are presented in Waste Management Plan, which was incorporated into the Field Implementation Plan and is located in Appendix 8.

7.2 Decontamination of Heavy Equipment

The split-spoon samplers and auger flights were decontaminated after each use. The split-spoon samplers were decontaminated in tubs using a solution of Alconox™ and water with a final rinse of clean water. The auger flights were decontaminated in a portable self-contained steam cleaner. All decontamination water was discharged to the PRS from which the samples were collected. (Refer to Section 10.0 for drum storage.)

The hollow-stem auger drill rigs and support vehicles were decontaminated before leaving the site. These vehicles were backed onto the decontamination area, and decontaminated using a high-pressure steam cleaner. All water was returned to the site per the NOI for TA-33.

The heavy equipment used during the VCA activities were decontaminated as described above, however the decon water was collected and disposed of at the appropriate disposal facility.

Section 8.0

8.0 EQUIPMENT RELEASE PROCEDURES

Prior to releasing equipment from TA-33, a smear survey of equipment was conducted conforming to ESH-1 requirements. Smears for gross alpha, beta and gamma were taken with Defensap cloth filters and placed in zip-lock bags, and smears for tritium were taken with 2.54-centimeter filter paper and placed into vials containing one milliliter of distilled water. All smears were taken over an area of 100 centimeters squared. The Laboratory's mobile radiation laboratory or an ESH-1 approved facility analyzed the smear filters. The smear surveys conformed to the Laboratory's Administrative Requirement (AR) 3-7 Radiation Exposure Control (LANL 1991b).

During the 1996 sampling activities, equipment was smeared by the ESH-1 radiological control technician and released from Laboratory property if results from the smear survey indicated the equipment contained activities below ESH-1 surface contamination limits for removable material (10,000 dpm for tritium and 1,000 dpm for alpha, beta, and gamma. This procedure conformed to ESH-1 requirements release of equipment.

Results for all equipment release smears are found in Appendix 10.

Section 9.0

9.0 MANAGEMENT OF WASTE

All wastes generated during sampling activities at TA-33 were managed conforming to the site-specific Waste Management Plan. This plan also complies with the Laboratory's AR 10-1 Radioactive Liquid Waste (LANL 1992f), AR 10-2 Low-Level Radioactive Solid Waste (LANL 1991c), AR 10-3 Hazardous and Mixed Waste (LANL 1996e), AR 10-9 Waste Profile Form (LANL 1996f), and LANL-ER-SOP 1-06 Management of RFI Generated Waste (LANL 1992g). The practice of waste minimization (as required by the Laboratory's AR 10-8 Waste Minimization [LANL 1991d]) was incorporated into the plan and greatly reduced the amount of waste that needed to be stored and managed.

Radioactive wastes that are awaiting characterization or disposal of are currently stored in radioactive material holding areas at East Site and Area 6. The East Site less-than-90-day storage area is located on a concrete pad east of building TA-33-87. The Area 6 waste holding areas are located south of Building TA-33-2.

All solid-waste and liquid-waste drums are labeled with appropriate labels.All labels are readible and readily seen for inspections and audits. The drums remain at the temporary storage areas while awaiting characterization.

Steel and plastic drums with rigid plastic liners provide both primary and secondary waste containment. Otherwise, secondary containment is provided by the bermed area constructed at the East Site storage area, as well as secondary-containment pallets. The bermed areas consist of heavy-mil plastic underlying the waste drums and overlying the frameworks of PVC pipe that form the area boundaries. The 55-gallon drums are set on wooden pallets inside the bermed areas and covered with tarps.

The solid and liquid wastes generated during sampling activities at TA-33 are described in Sections 9.1 and 9.2, respectively.

9.1 Management of Solid Waste

The types of solid wastes were generated during 1996 sampling activities at TA-33 include:

- Non-hazardous/non-radioactive metal wastes
- Non-hazardous/non-radidoactive non-metal wastes (i.e., foam, plastic, etc.)
- Radioactive metal wastes
- Hazardous metal wastes
- Hazardous soil wastes
- Radioactive liquid wastes
- Mixed metal wastes

Radioactive wastes are stored in the radioactive waste holding areas at Area 6 and East Site. Hazardous and Mixed wastes generated from 33-010(b) VCA activities were stored in the less-than-90-day waste storage area at East Site. Mixed soil wastes were treated with a 5% Portland Cement and mixing process which characterized the waste as radioactive, once the treatment process was completed, and the composite samples passed TCLP for inorganics. The less-than-90-day storage area was then designated as a radioactive waste holding area.

9.2 Management of Liquid Waste

Liquid wastes generated during 1996 sampling activities at TA-33 are composed of decontamination wash and rinse waters collected during remediation and VCA activities. Decontamination liquid generated from the 1996 VCA activities are stored at the Area 6 waste management area and the East Site waste management area in 55-gallon drum s with a rigid plastic liner.

10.0 CONCLUSION

The 1996 RFI sampling at the TA-33 completes Phase I sampling at TA-33 with the exception of the surface soil sampling and hand augering at 33-009 at Area 6.

These sampling activities may take place in 1998 . Land, radiation, and geophysical surveys were conducted conforming to ER SOPs and the RFI Work Plan. 273 surface soil, subsurface soil, and sediment samples were collected in conformance with ER SOPs and the RFI Work Plan. Health and safety monitoring was conducted in compliance with the Health and Safety Plan. Decontamination and waste management were conducted in compliance with the Waste Management Plan.

Section 11.0

Section 12.0

12.0 EXHIBITS

This section contains exhibits that are referenced in the preceding sections but were too large to include with the text.

Exhibit 1

Sample Identifications, PCOCs, and Method of Selection for 1996 Sampling Activities at TA-33

Exhibit 1

Sample Identifications, PCOCs, and Method of Selection for 1996 Sampling Activities at TA-33 (cont.)

Exhibit 1

Sample Identifications, PCOCs, and Method of Selection for 1996 Sampling Activities at TA-33 (cont.)

Exhibit 1

Sample Identifications, PCOCs, and Method of Selection for 1996 Sampling Activities at TA-33 (cont.)

Exhibit 1

Sample Identifications, PCOCs, and Method of Selection for 1996 Sampling Activities at TA-33 (cont.)

Exhibit 1

Sample Identifications, PCOCs, and Method of Selection for 1996 Sampling Activities at TA-33 (cont.)

Exhibit 1

Sample Identifications, PCOCs, and Method of Selection for 1996 Sampling Activities at TA-33 (cont.)

Exhibit 2
Sample Identifications, Depths, and Planar Coordinates for 1996 Sampling at TA-33

Sample	Site ID #	Sample #	Depth (inches)	N-S Plan Co	E-W Plan Co
Main Site					
002a-1	33-1015	AAA1915	tank	1739937.17	498619.96
002a-2	33-1016	AAA1916	tank	1739937.17	498619.96
002a-3	33-1017	AAA1917	0-6	1739926.87	498620.96
002a-4	33-1017	AAA1918	36	1739926.87	498620.96
002a-5	33-1017	AAA1919	48	1739926.87	498620.96
002a-4C	33-1017	AAA1920	36	1739927.87	498620.96
002a-6	33-1019	AAA1921	0-6	1739927.16	498695.26
002a-7	33-1020	AAA1922	0-6	1739947.72	498641.14
002a-8	33-1021	AAA1923	0-6	1739935.81	498659.65
002a-9	33-1021	AAA1924	60	1739935.81	498659.65
002a-10	33-1021	AAA1925	120	1739935.81	498659.65
002a-11	33-1022	AAA1926	0-6	1739932.25	498650.99
002a-12	33-1022	AAA1927	60	1739932.25	498650.99
002a-13	33-1022	AAA1928	120	1739932.25	498650.99
002b-3	33-1025	AAA1931	0-6	1739895.88	498612.48
002b-5	33-1025	AAA1934	30	1739895.88	
002c-3	33-1025	AAA1937	0-6	1739977.55	498621.83
002c-4	33-1025	AAA1938	30	1739977.55	498621.83
002c-4C	33-1025	AAA1939	30	1739978.55	498621.83
002d-1	33-1031	AAA1941	0-6	1740002.50	498701.50
002d-2	33-1032	AAA1942	0-6	1740020.00	498740.00
002d-3	33-1033	AAA1943	0-6	1740050.00	498800.00
002d-4	33-1034	AAA1944	0-6	1740100.00	498823.00
002e-1	33-1035	AAA1945	0-6	1739850.00	498600.00
002e-2	33-1036	AAA1946	0-6	1739810.00	498610.00
002e-3	33-1037	AAA1947	0-6	1739910.20	498891.50
004a-1	33-1038	AAA1948	56	1740351.90	498523.00
004a-2	33-1038	AAA1949	tank	1740351.90	498523.00
004a-4	33-1041	AAA1951	0-6	1740351.90	498528.00
004a-5	33-1041	AAA1952	36-60	1740351.90	498528.00
004a-6	33-1041	AAA1953	156-180	1740351.90	498528.00
004a-7	33-1042	AAA1954	0-6	1740432.79	498731.82

Exhibit 2

Sample Identifications, Depths, and Planar Coordinates for 1996 Sampling at TA-33 (cont.)

Sample	Site ID #	Sample #	Depth (inches)	N-S Plan Co	E-W Plan Co
004a-7C	33-1043	AAA1955	0-6	1740433.79	498731.82
004a-8	33-1044	AAA1956	0-6	1740375.79	498726.82
004a-9	33-1045	AAA1957	0-6	1740405.79	498673.82
004a-10	33-1045	AAA1958	18	1740405.79	498673.82
004a-12	33-1046	AAA1960	0-6	1740404.79	498739.82
004a-13	33-1046	AAA1961	18	1740404.79	498739.82
Seep Pit-West	33-1047			1740440.00	498715.00
004a-15	33-1048	AAA1963	120	1740450.00	498720.00
004a-16	33-1048	AAA1964	264-288	1740450.00	498720.00
004a-17	33-1048	AAA1965	444-486	1740450.00	498720.00
004a-18	33-1048	AAA1966	564-588	1740450.00	498720.00
Seep Pit-East	33-1049			1740432.20	498768.10
004a-19	33-1050	AAA1967	84-108	1740432.20	498773.10
004a-20	33-1050	AAA1968	264-288	1740432.20	498773.10
004a-21	33-1050	AAA1969	444-468	1740432.20	498773.10
004a-22	33-1050	AAA1970	444-468	1740432.20	498773.10
004h-1	33-1051	AAA1971	0-6	1740127.10	498497.20
004h-2	33-1052	AAA1972	0-6	1740127.10	498532.20
004h-2C	33-1053	AAA1973	0-6	1740128.10	498532.20
004h-3	33-1054	AAA1974	0-6	1740127.10	498568.20
004i-1	33-1055	AAA1975	0-6	1740295.10	498510.40
004i-2	33-1056	AAA1976	0-6	1740293.60	498516.20
004i-3	33-1057	AAA1977	0-6	1740283.10	498553.50
004i-4	33-1058	AAA1978	0-6	1740236.40	498506.70
004i-5	33-1059	AAA1979	0-6	1740234.10	498514.90
004i-6	33-1060	AAA1980	0-6	1740233.00	498539.50
005a-1	33-1061	AAA1981	0-6	1739891.70	498044.69
005a-2	33-1061	AAA1982	24	1739891.70	498044.69
005a-7	33-1062	AAA1987	0-6	1739892.47	498004.69
005a-8	33-1063	AAA1988	0-6	1739892.47	497954.69
005a-9	33-1064	AAA1989	0-6	1739892.47	497904.69
005b-1	33-1065	AAA1990	0-6	1739808.43	498078.93

Exhibit 2

Sample Identifications, Depths, and Planar Coordinates for 1996 Sampling at TA-33 (cont.)

Sample	Site ID #	Sample #	Depth (inches)	N-S Plan Co	E-W Plan Co
005b-2	33-1066	AAA1991	0-6	1739776.33	498040.63
005b-3	33-1067	AAA1992	0-6	1739744.13	498002.33
005c-1	33-1068	AAA1996	0-6	1739786.96	498122.14
005c-2	33-1068	AAA1994	36-60	1739786.96	498122.14
005c-1C	33-1068	AAA1995	0-6	1739787.96	498122.14
005c-7	33-1070	AAA2000	0-6	1739834.99	498075.11
005c-8	33-1070	AAA2001	34	1739834.99	498075.11
005c-13	33-1072	AAA2007	0-6	1739815.10	498113.00
005c-14	33-1072	AAA2008	24	1739815.10	498113.00
005c-19	33-1073	AAA2013	0-6	1739852.80	498152.80
005c-20	33-1073	AAA2014	24	1739852.80	498152.80
010f-1	33-1074	AAA2019	0-6	1739890.00	498899.00
010f-2	33-1075	AAA2020	0-6	1739881.00	498829.00
011a-1	33-1076	AAA2021	0-6	1739836.00	498157.24
011a-2	33-1077	AAA2022	0-6	1739832.70	498151.20
011a-3	33-1078	AAA2023	0-6	1739828.10	498152.17
011d-1	33-1079	AAA6864	2-6	1740148.60	498324.80
011d-2	33-1079	AAA6863	0-2	1740148.60	498324.80
011d-3	33-1081	AAA6867	2-6	1740138.93	498323.87
011d-4	33-1081	AAA6866	0-2	1740138.93	498323.87
011d-5	33-1083	AAA2028	0-6	1740150.10	498279.80
011e -1	33-1084	AAA2029	0-6	1739334.76	498432.82
011e -2	33-1085	AAA2030	0-6	1739328.01	
012a-1	33-1086	AAA2031	0-6	1740276.40	498480.20
012a-2	33-1087	AAA2032	0-6	1740296.80	498479.90
012a-3	33-1088	AAA2033	0-6	1740285.20	498500.00
012a-4	33-1089	AAA2034	0-6	1740293.00	498500.61
013-1	33-1090	AAA2035	0-6	1740020.00	498559.00
013-2	33-1091	AAA2036	0-6	1740041.00	498570.00
013-3	33-1092	AAA2037	0-6	1740027.00	498528.00
015-1	33-1093	AAA2038	0-6	1740248.70	498563.30
015-2	33-1094	AAA2039	0-6	1740242.50	498564.30

Exhibit 2

Sample Identifications, Depths, and Planar Coordinates for 1996 Sampling at TA-33 (cont.)

Sample	Site ID #	Sample #	Depth (inches)	N-S Plan Co	E-W Plan Co
016-1	33-1095	AAA2040	tank	1739314.81	498471.32
016-2	33-1095	AAA2041	tank	1739314.81	498471.32
016-3	33-1097	AAA2042	0-6	1738822.80	498773.70
016-4	33-1097	AAA2043	36-60	1738822.80	498773.70
016-5	33-1097	AAA2044	120-144	1738822.80	498773.70
016-6	33-1098	AAA2045	0-6	1738713.09	498593.68
016-6C	33-1099	AAA2046	0-6	1738714.09	498593.68
016-7	33-1100	AAA2047	0-6	1738712.74	498590.68
016-8	33-1101	AAA2048	0-6	1738703.39	498537.58
017VM-1	33-1102	AAA2049	0-6	1740257.80	498471.10
017-1C	33-1103	AAA2050	0-6	1740258.80	498471.10
017VM-2	33-1104	AAA2051	0-6	1740258.20	498467.40
017Dr-1	33-1105	AAA2052	0-6	1740338.10	498533.40
017Dr-2	33-1106	AAA2053	0-6	1740313.80	498559.80
017Dr-3	33-1107	AAA2054	0-6	1740298.60	498586.90
017Dr-4	33-1108	AAA2055	0-6	1740271.20	498337.90
017Dr-5	33-1109	AAA2056	0-6	1740151.30	498622.00
017Dr-6	33-1110	AAA2057	0-6	1740131.20	498719.50
017Dr-7	33-1111	AAA2058	0-6	1740121.30	498790.10
017Dr-8	33-1112	AAA2059	0-6	1740103.90	498795.90
017Dr-9	33-1113	AAA2060	0-6	1740160.20	498833.40
017Dr-10	33-1114	AAA2061	0-6	1740246.40	498702.40
017Dr-11	33-1115	AAA2062	0-6	1740074.60	498902.20
017Dr-12	33-1116	AAA2063	0-6	1739847.60	499062.40
017Dr-13	33-1117	AAA2064	0-6	1739898.50	498816.90
017Dr-14	33-1118	AAA2065	0-6	1739982.00	498868.80
017OR-1	33-1119	AAA2066	0-6	1740553.77	497887.57
017OR-2	33-1120	AAA2067	0-6	1740556.00	498123.00
017OR-3	33-1121	AAA2068	0-6	1740565.96	498297.90
017OR-3C	33-1122	AAA2069	0-6	1740566.96	498297.90
017OR-4	33-1123	AAA2070	0-6	1740605.84	498532.11
017OR-4N	33-1124	AAA2071	0-6	1740594.81	498542.59

Exhibit 2

Sample Identifications, Depths, and Planar Coordinates for 1996 Sampling at TA-33 (cont.)

Sample	Site ID #	Sample #	Depth (inches)	N-S Plan Co	E-W Plan Co
017OR-5	33-1125	AAA2072	0-6	1740639.00	498698.00
017OR-6	33-1126	AAA2073	0-6	1740615.04	498876.37
017OR-7	33-1127	AAA2074	0-6	1740355.50	497912.33
017OR-8	33-1128	AAA2075	0-6	1740371.87	498133.82
017OR-1C	33-1129	AAA2076	0-6	1740554.77	497887.57
017OR-10	33-1130	AAA2077	0-6	1740417.39	498516.45
017OR-11	33-1131	AAA2078	0-6	1740407.46	498698.22
017OR-11N	33-1132	AAA2079	0-6	1740415.91	498703.11
017OR-12	33-1133	AAA2080	0-6	1740385.09	498893.24
017OR-13	33-1134	AAA2081	0-6	1740216.91	497887.39
017OR-14	33-1135	AAA2082	0-6	1740218.10	498072.37
017OR-14N	33-1136	AAA2083	0-6	1740216.96	498072.10
017OR-17	33-1139	AAA2086	0-6	1740188.91	498711.89
017OR-18	33-1140	AAA2087	0-6	1740167.29	498894.93
017OR-19	33-1141	AAA2088	0-6	1740033.51	497947.37
017OR-20	33-1142	AAA2089	0-6	1740021.16	498120.28
017OR-21	33-1143	AAA2090	0-6	1739965.42	498267.88
017OR-23	33-1145	AAA2092	0-6	1739995.54	498711.86
017OR-24	33-1146	AAA2093	0-6	1740043.70	498868.69
017OR-25	33-1147	AAA2094	0-6	1739752.48	497855.52
017OR-25N	33-1148	AAA2095	0-6	1739754.19	497849.07
017OR-26	33-1149	AAA2096	0-6	1739828.73	498086.45
017OR-27	33-1150	AAA2097	0-6	1739839.16	498266.67
017OR-28	33-1151	AAA2098	0-6	1739779.82	498540.28
017OR-29	33-1152	AAA2099	0-6	1739782.28	498675.08
017OR-30	33-1153	AAA2100	0-6	1739814.24	498901.31
017OR-31	33-1154	AAA2101	0-6	1739552.82	497920.06
017OR-32	33-1155	AAA2102	0-6	1739552.14	498091.39
017OR-33	33-1156	AAA2103	0-6	1739604.00	498252.00
017OR-34	33-1157	AAA2104	0-6	1739635.37	498495.03
017OR-34C	33-1158	AAA2105	0-6	1739636.37	498495.03
017OR-35	33-1159	AAA2106	0-6	1739587.32	498696.82

Exhibit 2

Sample Identifications, Depths, and Planar Coordinates for 1996 Sampling at TA-33 (cont.)

Sample	Site ID #	Sample #	Depth (inches)	N-S Plan Co	E-W Plan Co
017OR-35N	33-1160	AAA2107	0-6	1739581.49	498697.08
017OR-36	33-1161	AAA2108	0-6	1739637.55	498937.34
017OR-37NE	33-1162	AAA2109	0-6	1739682.85	498957.51
017OR-38NE	33-1163	AAA2110	0-6	1739923.79	499193.57
017OR-41E	33-1166	AAA2113	0-6	1739915.12	499159.42
017OR-42E	33-1167	AAA2114	0-6	1739925.61	499545.98
017OR-43E	33-1168	AAA2115	0-6	1739887.47	499823.73
017OR-44E	33-1169	AAA2116	0-6	1739929.29	500144.56
017OR-45SE	33-1170	AAA2117	0-6	1739548.28	499021.59
017OR-46SE	33-1171	AAA2118	0-6	1739361.29	499239.23
017OR-47SE	33-1172	AAA2119	0-6	1739149.02	499543.48
017OR-48SE	33-1173	AAA2120	0-6	1738898.09	499720.54
017OR-49S	33-1174	AAA2121	0-6	1739528.83	498230.01
017OR-49S-N	33-1175	AAA2122	0-6	1739537.47	498218.99
017OR-50S	33-1176	AAA2123	0-6	1739329.99	498482.63
017OR-51S	33-1177	AAA2124	0-6	1739091.01	498696.71
017OR-52S	33-1178	AAA2125	0-6	1738914.91	498902.09
Area 6					
004d-3	33-1181	AAA2128	0-6	1740483.90	497778.80
004d-4	33-1181	AAA2129	96/75.6	1740483.90	497778.80
004d-3-dup	33-1181	AAA2130	0-6	1740483.90	497778.80
004d-5	33-1181	AAA2131	60/60	1740483.90	497778.80
004d-6	33-1183	AAA2132	0-6	1740466.20	497815.60
004d-7	33-1183	AAA2133	60	1740466.20	497815.60
004d-8	33-1183	AAA2134	96	1740466.20	497815.60
004d-9	33-1184	AAA2135	0-6	1740473.50	497808.60
004d-10	33-1184	AAA2136	60	1740473.50	497808.60
004d-11	33-1184	AAA2137	84	1740473.50	497808.60
004d-12	33-1185	AAA2138	0-6	1740448.40	497857.90
004d-13	33-1186	AAA2139	0-6	1740432.80	497889.30
004d-14	33-1187	AAA2140	0-6	1740118.07	497954.26

Exhibit 2

Sample Identifications, Depths, and Planar Coordinates for 1996 Sampling at TA-33 (cont.)

Sample	Site ID #	Sample #	Depth (inches)	N-S Plan Co	E-W Plan Co
004d-14C	33-1188	AAA2141	0-6	1740119.07	497954.26
004d-15(330)	33-1189	AAA2142	0-6	1740090.05	497894.22
004d-16(329)	33-1190	AAA2143	0-6	1740031.15	497858.72
004d-17(328)	33-1191	AAA2144	0-6	1739984.16	497824.54
004g-1(321)	33-1192	AAA2145	0-6	1740499.91	497631.28
004g-2(319)	33-1193	AAA2146	0-6	1740503.20	497590.26
004g-3(322)	33-1194	AAA2147	0-6	1740520.60	497479.45
004g-4(323)	33-1195	AAA2148	0-6	1740559.62	497352.58
004g-5(320)	33-1196	AAA2149	0-6	1740458.73	497553.06
007cOR-1	33-1197	AAA2150	0-6	1740427.41	497416.30
007cOR-3C	33-1198	AAA2151	0-6	1740441.61	497621.98
007cOR-2	33-1199	AAA2152	0-6	1740447.12	497481.25
007cOR-3	33-1200	AAA2153	0-6	1740440.61	497621.98
007cOR-4	33-1201	AAA2154	0-6	1740465.60	497709.97
007cOR-5	33-1202	AAA2155	0-6	1740356.16	497417.24
007cOR-6	33-1203	AAA2156	0-6	1740349.66	497476.83
007cOR-7	33-1204	AAA2157	0-6	1740327.46	497617.29
007cOR-8	33-1205	AAA2158	0-6	1740344.24	497701.79
007cOR-9	33-1206	AAA2159	0-6	1740247.97	497485.89
007cOR-8C	33-1207	AAA2160	0-6	1740345.24	497701.79
007cOR-10	33-1208	AAA2161	0-6	1740268.06	497606.25
007cOR-11	33-1209	AAA2162	0-6	1740254.36	497724.45
007cGM-12	33-1210	AAA2163	0-6	1740440.00	497640.00
007cGM-13	33-1211	AAA2164	0-6	1740415.00	497640.00
007cGM-14	33-1212	AAA2165	0-6	1740300.00	497540.00
009-1	33-1213	AAA2166	0-6	1740451.00	497372.00
009-1C	33-1214	AAA2167	0-6	1740452.00	497372.00
009-2	33-1215	AAA2168	0-6	1740389.00	497393.00
009-3	33-1216	AAA2169	0-6	1740422.00	497297.00
009-4	33-1217	AAA2170	0-6	1740376.00	497299.00

Exhibit 2

Sample Identifications, Depths, and Planar Coordinates for 1996 Sampling at TA-33 (cont.)

Sample	Site ID #	Sample #	Depth (inches)	N-S Plan Co	E-W Plan Co
009-5	33-1218	AAA2171	0-6	1740495.00	497178.00
009-6	33-1219	AAA2172	0-6	1740391.00	497155.00
009-7	33-1220	AAA2173	0-6	1740472.29	497282.61
009-8	33-1221	AAA2174	0-6	1740435.13	497249.35
009-9	33-1222	AAA2175	0-6	1740188.18	497062.42
009-10	33-1223	AAA2176	0-6	1740000.32	496939.19
010e-1	33-1224	AAA2177	0-6	1740345.00	497860.00
010e-2	33-1225	AAA2178	0-6	1740300.00	497815.00
010e-3	33-1226	AAA2179	0-6	1740330.00	497815.00

C=colocated samples
N=neighbor samples
OR=operational release
GM=gun mount
Dr=drainage
VM=vehicle maintenance

(320) stake #
NE=northeast
E=east
SE=southeast
S=south

Exhibit 3

Standard Operating Procedures Used During 1996 Sampling Activities at TA-33

STANDARD OPERATING PROCEDURES			
Procedure	**Procedure Title**	**ER**	**Other**
Survey/Sampling Instructions			
Channel Mapping	Geomorphic Characterization	3.08	
Magnetic	General Surface Geophysics	3.02	
Electromagnetic	General Surface Geophysics	3.02	
Radiation	Measurements of Gamma-Ray Fields Using a NaI Detector	6.23	
Explosives	Field Spot Test for Explosives		27.05.011
Hollow-stem Auger Drilling	Drilling Methods and Drill Site Management	4.01	
Lithologic Logging	Field Logging, Handling and Documenting Borehole Materials	12.01	
Surface Soil Sampling	Spade and Scoop N Collection of Soil Samples	6.09	
Sludge Sampling from Tank	Coliwasa Samples for Liquids and Slurries	6.15	
Sed Sampling from Stream	Sediment Material Collection	6.14	
Soil Sample from Auger Hole	Hand Auger and Thin-Wall Tube Sampler	6.10	
Tuff Sample from Auger Hole	Hand Auger and Thin-Wall Tube Sampler	6.10	
Tuff Sample from Drill Hole	Sample Collection from Split Spoon Samplers and Shelby Tube Samplers	6.24	
High Volume Samplers	Total Suspended Particulate Air Sampling	6.25	
Land Survey	LANL Manual		Eng-3
General Instructions			
Procedure	**Procedure Title**	**ER**	**Other**
General Field Investigation	General Introduction for Field Investigation	1.01	
Sample Containers	Sample Containers and Preservation	1.02	
Sample Handling	Handling, Packaging, and Shipping Samples	1.03	
Documentation	Sample Control and Field Documentation	1.04	
QC/Chain of Custody	Field Quality Control Samples	1.05	
Health and Safety in the Field			
Procedure	**Procedure Title**	**ER**	**Other**
	Guidance on Tailgate Safety Meetings	2.05	
	Radiation Safety and Monitoring for Environmental Restoration	2.1	
	Respiratory Protection	NA	HS-5
	Anti-Contamination Apparel	NA	HS-1
	Heat and Cold Stress and Natural Hazards	2.06, Rev 1	
	Guidance on Field Safety & Health Requirements	2.03	
	Noise Monitoring	2.04	

Exhibit 3

Standard Operating Procedures Used During 1996 Sampling Activities at TA-33 (cont.)

STANDARD OPERATING PROCEDURES			
Procedure	**Procedure Title**	**ER**	**Other**
	Field Monitoring Instrumentation - Chemical Parameters	2.11	
	Personal Protective Equipment for Physical Hazards	2.01, Rev 1	
	Bloodborne Pathogen Control	2.12	
	Drilling Safety	2.14	
	Safety Requirements for Canyon/Mesa Samp	2.15	
	Exposure Monitoring Strategy	2.16	
Waste Management			
Procedure	**Procedure Title**	**ER**	**Other**
Handling of Liquid Wastes	Management of RFI-Generated Waste	1.06	
Handling of Solid Wastes	Management of RFI-Generated Waste	1.06	

Exhibit 4

Sample Identifications, Depths, and Preliminary Results on Tritium Concentrations and Moisture Content

Borehole #1

Sample Number	Depth (feet)	Tritium Concentration	Moisture Content	Date Sample Collected
AAA3884	.5	1200.00 pCi/g	28.22%	08/18/93
AAA3281	9.4 - 10	6.80 pCi/g	10.84%	08/18/93
AAA3282	19.4 - 20	4.70 pCi/g	10.93%	08/18/93
AAA3283	28.6 - 30	4.10 pCi/g	10.58%	08/18/93
AAA4938	45.2 - 45.6	3.00 pCi/g	10.11%	10/19/93
AAA4940	53.7 - 54	7.50 pCi/g	12.66%	10/19/93
AAA3284	64.5 - 65	7.20 pCi/g	11.73%	10/19/93
AAA4944	77.2 - 77.5	12.00 pCi/g	17.22%	10/20/93
AAA4946	84.4 - 84.7	9.20 pCi/g	13.72%	10/20/93
AAA3286	92 - 93	11.00 pCi/g	13.18%	10/20/93
AAA4952	107.5 - 108	13.00 pCi/g	14.67%	10/20/93
AAA3289	120 - 120.5	16.00 pCi/g	14.72%	10/20/93
AAA3292	127 - 128	27.00 pCi/g	15.89%	10/21/93
AAA4956	133.9 - 134.2	22.00 pCi/g	18.47%	10/21/93
AAA4958	142.5 - 143	22.00 pCi/g	17.69%	10/21/93
AAA4950	155.5 - 155.8	16.00 pCi/g	16.51%	10/21/93
AAA4926	167 - 167.2	17.00 pCi/g	19.71%	10/21/93
AAA3290	168.3 - 169	12.00 pCi/g	20.78%	10/21/93
AAA4964	169.9 - 170.1	5.30 pCi/g	14.02%	10/24/93
AAA3291	180.7 - 181.7	6.90 pCi/g	14.98%	10/24/93
AAA4968	193.2 - 193.5	4.50 pCi/g	17.05%	10/24/93
AAA3294	212 - 212.3	34.00 pCi/g	16.85%	10/24/93
AAA3296	217 - 217.3	21.00 pCi/g	16.57%	10/24/93
AAA3295	227 - 227.1	23.00 pCi/g	5.47%	10/24/93
AAA3297	230 - 230.2	42.00 pCi/g	13.05%	10/24/93

Exhibit 4

Sample Identifications, Depths, and Preliminary Results on Tritium Concentrations and Moisture Content (cont.)

Borehole #2

Sample Number	Depth (feet)	Tritium Concentration	Moisture Content	Date Sample Collected
AAA3885	.5	0.03 pCi/g	8.71%	08/18/93
AAA3308	9.7 - 10	140.00 pCi/g	7.25%	08/18/93
AAA3309	19.7 - 20	560.00 pCi/g	7.21%	08/18/93
AAA3310	28.8 - 30	920.00 pCi/g	7.48%	08/18/93
AAA4904	40.8 - 41.1	1300.00 pCi/g	7.67%	09/23/93
AAA4906	55.5 - 56	770 pCi/g	6.29%	09/24/93
AAA3311	64.8 - 65.7	1300.00 pCi/g	7.44%	09/24/93
AAA4910	75.8 - 76.2	5400.00 pCi/g	9.09%	09/27/93
AAA4912	80.1 - 80.4	5000.00 pCi/g	7.77%	09/27/93
AAA3312	94 - 95.5	7900.00 pCi/g	10.75%	09/27/93
AAA4916	104.4 - 104.8	6.9×10^3 pCi/g	17.93%	09/27/93
AAA4918	115.2 - 115.5	5.7×10^3 pCi/g	10.78%	09/27/93
AAA3314	124.4 - 126	4.0×10^3 pCi/g	13.78%	09/28/93
AAA4922	134.7 - 135.1	3615.67 pCi/g	13.85%	09/28/93
AAA4924	146.9 - 147.2	1722.30 pCi/g	14.58%	09/28/93
AAA3317	153 - 155	1452.21 pCi/g	15.33%	09/28/93
AAA4928	162.8 - 163	550.00 pCi/g	17.13%	09/28/93
AAA4930	174.7 - 174.9	140.00 pCi/g	14.12%	09/29/93
AAA3318	183.9 - 184.6	4.92 pCi/g	14.97%	09/29/93
AAA4934	197 - 197.4	0.59 pCi/g	17.29%	09/29/93
AAA4936	205 - 205.4	0.59 pCi/g	16.18%	09/29/93
AAA3319	211.5 - 212.2	0.32 pCi/g	18.46%	09/30/93
AAA3320	218.5 - 219	1.30 pCi/g	14.49%	09/30/93
AAA4903	223.4 - 223.8	3.60 pCi/g	0.46%	10/01/93
AAA4905	232.7 - 233	5.20 pCi/g	16.00%	10/01/93
AAA3325	244 - 247	9.10 pCi/g	15.40%	10/01/93
AAA4911	252 - 252.5	5.60 pCi/g	6.17%	10/01/93
AAA4915	268.7 - 269	1.60 pCi/g	8.19%	10/08/93
AAA4917 (Cuttings)	270 - 271	0.66 pCi/g	1.52%	10/08/93
AAA4919 (Cuttings)	280 - 281	22.00 pCi/g	3.92%	10/08/93
AAA4921 (Cuttings)	290 - 291	1.30 pCi/g	3.78%	10/08/93

Exhibit 4

Sample Identifications, Depths, and Preliminary Results on Tritium Concentrations and Moisture Content (cont.)

AAA4923 (Cuttings)	300 - 301	4.10 pCi/g	0.38%	10/11/93
AAA3321	314 - 315	2.80 pCi/g	1.05%	10/11/93

Exhibit 4

Sample Identifications, Depths, and Preliminary Results on Tritium Concentrations and Moisture Content (cont.)

Borehole #3

Sample Number	Depth (feet)	Tritium Concentration	Moisture Content	Date Sample Collected
AAA3886	.5	3.90 pCi/g	22.24%	08/19/93
AAA3336	9.5 - 10	22.00 pCi/g	11.95%	08/19/93
AAA3337	19.7 - 20	16.00 pCi/g	10.34%	08/19/93
AAA3338	29.6 - 30	24.00 pCi/g	12.24%	08/19/93
AAA4870	35.1 - 35.3	25.00 pCi/g	11.56%	08/27/93
AAA4872	47.2 - 47.5	9.80 pCi/g	12.54%	08/27/93
AAA3339	58.8 - 59.3	5.20 pCi/g	11.80%	08/30/93
AAA4876	65.9 - 66.3	3.70 pCi/g	12.86%	08/30/93
AAA4878	71.8 - 72.2	2.70 pCi/g	12.60%	08/30/93
AAA3340	95 - 97	2.20 pCi/g	13.92%	08/30/93
AAA4882	99.7 - 100.4	1.60 pCi/g	13.03%	09/03/93
AAA4884	108 - 108.3	1.10 pCi/g	14.05%	09/03/93
AAA3343	122.3 - 125	1.60 pCi/g	14.78%	09/07/93
AAA4888	132.1 - 134.6	0.55 pCi/g	13.67%	09/07/93
AAA4890	140.5 - 140.7	1.30 pCi/g	15.45%	09/07/93
AAA3345	152 - 153	1.80 pCi/g	12.25%	09/10/93
AAA4894	159.8 - 160	1.70 pCi/g	18.38%	09/10/93
AAA4896	169.8 - 170	0.79 pCi/g	20.08%	09/10/93
AAA3346	182 - 184	1.50 pCi/g	16.84%	09/10/93
AAA4900	191.5 - 192	2.30 pCi/g	14.63%	09/10/93
AAA4902	200 - 200.5	0.00 pCi/g		09/15/93
AAA3347	209.5 - 210	0.00 pCi/g	15.39%	09/15/93
AAA5269	219.5 - 220	9.00 pCi/g	18.85%	09/15/93
AAA5270	233.6 - 234	2.20 pCi/g	14.82%	09/15/93
AAA5272	237.3 - 237.8	1.90 pCi/g	12.99%	09/16/93
AAA3350	245 - 246	1.30 pCi/g	19.03%	09/16/93

Exhibit 4

Sample Identifications, Depths, and Preliminary Results on Tritium Concentrations and Moisture Content (cont.)

Boreholes #1, #2, and #3

QA/QC

BH #	Sample Number	QA/QC Type	QA/QC of	Depth (feet)	Tritium Concentration	Moisture Content	Date Sample Collected
1	AAA4501	Blank (soil)	BH-1,2,3	.5	0.36 pCi/g	1.80%	08/17/93
1	AAA4929	Blank (water)	BH-1	N/A	Not available	Not applicable	10/19/93
1	AAA3888	QAMS	AAA3283	28.6 - 30	5.00 pCi/g	9.50%	08/17/93
1	AAA3889	QAMSD	AAA3283	28.6 - 30	1.70 pCi/g	9.57%	08/17/93
1	AAA3287	QAMS	AAA3286	92 - 93	10.00 pCi/g	13.02%	10/20/93
1	AAA3288	QAMSD	AAA3286	92 - 93	12.00 pCi/g	14.62%	10/20/93
1	AAA4506	Rinsate	BH-1	N/A	Not available	Not applicable	10/19/93
2	AAA4503	Blank (soil)	BH-2	.5	1.20 pCi/g	16.71%	09/23/93
2	AAA3894	QAMS	AAA3310	28.8 - 30	890.00 pCi/g	8.05%	08/18/93
2	AAA3895	QAMSD	AAA3310	28.8 - 30	750.00 pCi/g	8.07%	08/18/93
2	AAA3313	Duplicate	AAA3312	94 - 95.5	7700.00 pCi/g	9.44%	09/27/93
2	AAA3315	QAMS	AAA3314	124.4 - 126	4.2×10^3 pCi/g	12.72%	09/28/93
2	AAA3316	QAMSD	AAA3314	124.4 - 126	3.9×10^3 pCi/g	14.66%	09/28/93
2	AAA4502	Rinsate	BH-2	N/A	Not available	Not applicable	08/19/93
3	AAA4507	Blank (soil)	BH-3	.5			08/25/93
3	AAA3896	QAMS	AAA3886	.5	2.20 pCi/g	20.36%	08/19/93

Exhibit 4

Sample Identifications, Depths, and Preliminary Results on Tritium Concentrations and Moisture Content (cont.)

3	AAA3897	QAMSD	AAA3886	.5	0.75 pCi/g	11.20%	08/19/93
3	AAA3341	QAMS	AAA3340	95 - 97	1.70 pCi/g	12.96%	08/30/93
3	AAA3342	QAMSD	AAA3340	95 - 97	2.20 pCi/g	12.04%	08/30/93
3	AAA3344	Duplicate	AAA3343	122.3 - 125	1.50 pCi/g	9.27%	09/17/93
3	AAA450	Rinsate	BH-3	N/A	Not available	Not applicable	09/09/93

Exhibit 5

Quality Control Samples Collected during May 1996 Sampling at TA-33

Sample	Date Collect	QA/QC Type	Sample Media	Sample QA	Sample #
Field Blank	5/10/93	blank	sediments	-	AAA2182
Field Blank	5/11/93	blank	sediments	-	AAA2184
Field Blank	5/12/93	blank	sediments	-	AAA2187
Field Blank	5/12/93	blank	sediments	-	AAA2188
Field Blank	5/14/93	blank	sediments	-	AAA2191
Field Blank	5/14/93	blank	sediments	-	AAA2192
Field Blank	5/17/93	blank	sediments	-	AAA2196
Field Blank	5/19/93	blank	sediments	-	AAA2197
Field Blank	5/20/93	blank	sediments	-	AAA2199
Field Blank	5/20/93	blank	sediments	-	AAA2200
Field Blank	5/21/93	blank	sediments	-	AAA2201
Field Blank	5/24/93	blank	sediments	-	AAA2206
Field Blank	5/24/93	blank	water	-	AAA2207
Field Blank	5/25/93	blank	sediments	-	AAA2240
Field Blank	5/26/93	blank	sediments	-	AAA2245
Field Blank	5/27/93	blank	sediments	-	AAA2248
Field Blank	5/27/93	blank	sediments	-	AAA2249
Field Blank	5/28/93	blank	sediments	-	AAA2271
Rinsate	5/19/93	rinsate	water	-	AAA2198
Rinsate	5/24/93	rinsate	water	-	AAA2208
Rinsate	5/25/93	rinsate	water	-	AAA2241
Rinsate	5/26/93	rinsate	water	-	AAA2246
Rinsate	5/27/93	rinsate	water	-	AAA2250
Rinsate	5/28/93	rinsate	water	-	AAA2270
010f-2 QA	5/13/93	matrix spike	soil	AAA2020	AAA2212
010f-2 QA	5/13/93	matr spike dup	soil	AAA2020	AAA2213
002e-1 QA	5/13/93	matrix spike	sediments	AAA1945	AAA2214
002e-1 QA	5/13/93	matr spike dup	sediments	AAA1945	AAA2215
017dr-8 QA	5/19/93	matrix spike	sediments	AAA2059	AAA2216
017dr-8 QA	5/19/93	matr spike dup	sediments	AAA2059	AAA2217
017or-12 QA	5/11/93	matrix spike	sediments	AAA2080	AAA2218
017or-12 QA	5/11/93	matr spike dup	sediments	AAA2080	AAA2219

Exhibit 5

Quality Control Samples Collected during May 1996 Sampling at TA-33 (cont.)

Sample	Date Collect	QA/QC Type	Sample Media	Sample QA	Sample #
017or-20 QA	5/13/93	matrix spike	sediments	AAA2089	AAA2221
017or-20 QA	5/13/93	matr spike dup	sediments	AAA2089	AAA2222
007c-4 QA	5/20/93	matrix spike	soil	AAA2154	AAA2223
007c-4 QA	5/20/93	matr spike dup	soil	AAA2154	AAA2224
007c-13 QA	5/20/93	matrix spike	soil	AAA2164	AAA2225
007c-13 QA	5/20/93	matr spike dup	soil	AAA2164	AAA2226
010e-1 QA	5/21/93	matrix spike	soil	AAA2177	AAA2227
010e-1 QA	5/21/93	matr spike dup	soil	AAA2177	AAA2228
004d-6 QA	5/28/93	matrix spike	soil/tuff	AAA2132	AAA2272
004d-6 QA	5/28/93	matr spike dup	soil/tuff	AAA2132	AAA2273
011d-5 QA	5/11/93	matrix spike	soil	AAA2028	AAA2274
011d-5 QA	5/11/93	matr spike dup	soil	AAA2028	AAA2275
002a-7 QA	5/25/93	matrix spike	soil/tuff	AAA1922	AAA2238
002a-7 QA	5/25/93	matr spike dup	soil/tuff	AAA1922	AAA2239
004a-8 QA	5/26/93	matrix spike	soil/tuff	AAA1956	AAA2243
004a-8 QA	5/26/93	matr spike dup	soil/tuff	AAA1956	AAA2244
005c-7 QA	5/27/93	matrix spike	soil/tuff	AAA2000	AAA2256
005c-7 QA	5/27/93	matr spike dup	soil/tuff	AAA2000	AAA2257
004h-1	5/10/93	duplicate	sediments	AAA1971	AAA2181
002d-1		duplicate	sediments	AAA1941	AAA2185
010f-1	5/13/93	duplicate	soils	AAA2019	AAA2186
011a-1	5/14/93	duplicate	soils	AAA2021	AAA2189
o11e-1	5/14/93	duplicate	soils	AAA2029	AAA2190
017dr-5	5/19/93	duplicate	sediments	AAA2056	AAA2193
016-1	5/24/93	duplicate	fluid	AAA2040	AAA2203
016-2	5/24/93	duplicate	sludge	AAA2041	AAA2204
016-7	5/24/93	duplicate	sediments	AAA2047	AAA2205
007c-12	5/20/93	duplicate	soils	AAA2163	AAA2209
007c-14	5/20/93	duplicate	soils	AAA2165	AAA2210

Exhibit 5

Quality Control Samples Collected during May 1996 Sampling at TA-33 (cont.)

Sample	Date Collect	QA/QC Type	Sample Media	Sample QA	Sample #
010e-2	5/21/93	duplicate	soils	AAA2178	AAA2211
002a-6	5/24/93	duplicate	soil/tuff	AAA1921	AAA2237
004a-4	5/26/93	duplicate	soil/tuff	AAA1951	AAA2242
005a-1	5/27/93	duplicate	soil/tuff	AAA1981	AAA2255
017-OR-6	5/17/93	duplicate	sediments	AAA2231	AAA2073
004a-1	5/26/93	duplicate	fluid	AAA1948	AAA2232
004d-3	5/28/93	duplicate	soils	AAA2128	AAA2130

OR=operational release

GM=gun mount

Dr=drainage

VM=vehicle maintenance

REFERENCES

EPA 1992: Environmental Protection Agency, "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1, Soils and Solid Media" 1989

LANL 1991a: Los Alamos National Laboratory Environmental Restoration Generic Quality Assurance Project Plan, 1991

LANL 1991b: Los Alamos National Laboratory Administrative Requirement 3-7, "Radiation Exposure Control," 1991

LANL 1991c: Los Alamos National Laboratory Administrative Requirement 10-2, "Low-Level Radioactive Solid Waste," 1991

LANL 1991d: Los Alamos National Laboratory Administrative Requirement 10-8, "Waste Minimization," 1991

LANL 1992a: Los Alamos National Laboratory RFI Work Plan for OU 1122, 1992

LANL 1992b: Los Alamos National Laboratory No. ER- SOP-6.09, "Spade and Scoop Method for Collection of Soil Samples," 1992

LANL 1992c: Los Alamos National Laboratory No. ER-SOP-6.15, "Coliwasa Sampler for Liquids and Slurries," 1992

LANL 1992d: Los Alamos National Laboratory No. ER-SOP-6.10, "Hand Auger and Thin-Wall Tube Sampler," 1992

LANL 1992e: Los Alamos National Laboratory No. ER- SOP-4.01, "Drilling Methods and Drill Site Management," 1992

LANL 1992f: Los Alamos National Laboratory Administrative Requirement 10-1, "Radioactive Liquid Waste," 1992

LANL 1992g: Los Alamos National Laboratory No. ER-SOP-1.06, "Management of RFI-Generated Waste," 1992

LANL 1996a: Los Alamos National Laboratory Survey Procedures Manual, Facilities Engineering Division, 1996

LANL 1996b: Los Alamos National Laboratory No. ER-SOP-1.04, "Sample Control and Field Documentation," 1996

LANL 1996c: Los Alamos National Laboratory No. ER-SOP-6.24, "Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers," 1996

LANL 1996d: Los Alamos National Laboratory No. ER-SOP-12.01, "Field Logging, Handling, and Documentation of Borehole Materials," 1996

LANL 1996e: Los Alamos National Laboratory Administrative Requirement 10-3, "Hazardous and Mixed Waste," 1996

LANL 1996f: Los Alamos National Laboratory Administrative Requirement 10-9, "Waste Profile Form," 1996

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EPA 1992: Environmental Protection Agency, "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1, Soils and Solid Media" 1989

LANL 1991a: Los Alamos National Laboratory Environmental Restoration Generic Quality Assurance Project Plan, 1991

LANL 1991b: Los Alamos National Laboratory Administrative Requirement 3-7, "Radiation Exposure Control," 1991

LANL 1991c: Los Alamos National Laboratory Administrative Requirement 10-2, "Low-Level Radioactive Solid Waste," 1991

LANL 1991d: Los Alamos National Laboratory Administrative Requirement 10-8, "Waste Minimization," 1991

LANL 1992a: Los Alamos National Laboratory RFI Work Plan for OU 1122, 1992

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LANL 1992c: Los Alamos National Laboratory No. ER-SOP-6.15, "Coliwasa Sampler for Liquids and Slurries," 1992

LANL 1992d: Los Alamos National Laboratory No. ER-SOP-6.10, "Hand Auger and Thin-Wall Tube Sampler," 1992

LANL 1992e: Los Alamos National Laboratory No. ER- SOP-4.01, "Drilling Methods and Drill Site Management," 1992

LANL 1992f: Los Alamos National Laboratory Administrative Requirement 10-1, "Radioactive Liquid Waste," 1992

LANL 1992g: Los Alamos National Laboratory No. ER-SOP-1.06, "Management of RFI-Generated Waste," 1992

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LANL 1996b: Los Alamos National Laboratory No. ER-SOP-1.04, "Sample Control and Field Documentation," 1996

LANL 1996c: Los Alamos National Laboratory No. ER-SOP-6.24, "Sample Collection from Split-Spoon Samplers and Shelby Tube Samplers," 1996

LANL 1996d: Los Alamos National Laboratory No. ER-SOP-12.01, "Field Logging, Handling, and Documentation of Borehole Materials," 1996

LANL 1996e: Los Alamos National Laboratory Administrative Requirement 10-3, "Hazardous and Mixed Waste," 1996

LANL 1996f: Los Alamos National Laboratory Administrative Requirement 10-9, "Waste Profile Form," 1996

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0163

Date March 19, 1996 **Time** 1545 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01619	0	6	in

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	GSCAN	5 Gal Polyethylene	None	1122-95-0012

Weather Clear, breeze from the NE 0-10 mph, cool, 58 F

Sample Description Crushed tuff and moderate tuff sands and gravels. Slightly moist to moist.

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01619	0 to	6 in	FID	N/A	ppm	
33-01619	0 to	6 in	Field HE	N/A		
33-01619	0 to	6 in	Field Rad (alpha)	N/A	cpm	
33-01619	0 to	6 in	Field Rad (beta/gam)	bkg	cpm	
33-01619	0 to	6 in	PCB	N/A	ppm	
33-01619	0 to	6 in	PID	N/A	ppm	

Photo (Roll. Frame, Azimuth, Subject, Participants):

Roll 1, photos 12 and 13. Roll 1 is entirely (up to 12) of this Mower Project.

Comments:

Sample description: loamy, moderate roots. Light, pinkish brown color.

This soil was collected for the Mower Project for the SGS (Segmented Gate System) pilot project at the Area 6 berm. This was the control sample collected to perform a background check. The soil was collected from DOE property across from Bandelier National Monument. The sample will be analyzed in Albuquerque using the mock-up SGS.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0163

Date 3/19/96 Time 1515

Technical Area 33 Operable Unit 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01619	0	6"	

Sample Type ~~Soil - Subsurface~~ Surface

Sample Location

Name (Print) ~~Russell Abell~~ KRISTI BEGOIN

Signature

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	GSCAN	5 Gal Polyethylene	None	1122-95-0012

Weather Clear, Breezy from the NE 0-10mph, Cool - 58°F.

Sample Description Crushed tuff and Moderate tuff sands and gravels.

Field Screening Loamy, Moderate Roots. Slightly Moist to moist. Light, Pinkish brown color

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01619	0 to	0	FID	N/A	ppm	
33-01619	0 to	0	Field HE	N/A		
33-01619	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01619	0 to	0	Field Rad (beta/gam)	Background	cpm	
33-01619	0 to	0	PCB	N/A	ppm	
33-01619	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 1, Photos 12 & 13
Roll 1 is entirely (up to #12) of this Mower Project.

Comments:

This soil was collected for the mower project for the SGS (Segmented Gate System) pilot project at the Area 6 Berm. This was the control sample collected to perform a background check. The soil was collected from DOE property across from Bandelier National Monument

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0165

Date March 19, 1996 **Time** 1530 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01621	1	2	ft

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	GSCAN	5 Gal Polyethylene	None	1122-95-0014

Weather clear, breeze from the NE 0-10 mph, cool, 58 F

Sample Description same as 0333-95-0164 except much more vermiculite in the soil (see comments)

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01621	1 to 2 ft	FID	N/A	ppm	
33-01621	1 to 2 ft	Field HE	N/A		
33-01621	1 to 2 ft	Field Rad (alpha)	N/A	cpm	
33-01621	1 to 2 ft	Field Rad (beta/gam)		cpm	
33-01621	1 to 2 ft	PCB	N/A	ppm	
33-01621	1 to 2 ft	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 1, photos 16,17 and 18.

Comments:

sample description: Depleted uranium is present throughout the soil. Approx. 20% DU. Soil collected from a DU pocket present in the very center of the berm. Approx. 3 ft. in and 2 ft down from the toe of the berm

The sample will be analyzed in Albuquerque using the mock-up SGS.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0165 LF 5/20/96

Date 3/19/96 **Time** 1545 **Sample Type** Soil - ~~Subsurface~~ Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** 3/19/96 ~~Russell Abell~~ Krish Beguin

Composite Type: None **Signature** Krish Beguin

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01621	~~0~~ ← LF 5/20/96 → ~~0~~ 1 foot to 2 foot		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	GSCAN	5 Gal Polyethylene	None	1122-95-0014

Weather Same as ~~0311~~ 0333-95-0163

Sample Description Same as 0333-95-0164 except much more vermiculite

Field Screening in the soil Approx. 5% vermiculite. Depleted uranium is (See below

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01621	0 to	0	FID	N/A	ppm	
33-01621	0 to	0	Field HE	N/A		
33-01621	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01621	0 to	0	Field Rad (beta/gam)		cpm	
33-01621	0 to	0	PCB	N/A	ppm	
33-01621	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photos 16, 17, 18

Comments: Soil: present throughout the soil. Approx 20% DU. Soil collected from a DU pocket present in the very center of the berm. Approx. 3 feet in and 2 ft. down from the toe of the berm.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0164

Date March 19, 1996 **Time** 1515 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01620	0	1	ft

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	GSCAN	5 Gal Polyethylene	None	1122-95-0013

Weather Clear, sunny, cool, 58F, breeze from the NE 0-10 mph

Sample Description loamy, silty soil, moderate organics (roots, grass). Slightly moist.

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01620	0 to 1 ft	FID	N/A	ppm	
33-01620	0 to 1 ft	Field HE	N/A		
33-01620	0 to 1 ft	Field Rad (alpha)	N/A	cpm	
33-01620	0 to 1 ft	Field Rad (beta/gam)	bkg	cpm	
33-01620	0 to 1 ft	PCB	N/A	ppm	
33-01620	0 to 1 ft	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 1, photos 14 and 15. Pushing the mower along the course.

Comments:

Sample Description: Moderate tuff gravels. Light brown.

This sample collected is assured to be 'fairly clean' - that is ~ not radioactive although representative of the soil present in the berm. Soil was collected at the western-most toe of the berm. This soil had no elevated reading with the mower. The sample will be analyzed in Albuquerque using the mock-up SGS.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0164

Date 3/19/96 **Time** 1530 **Sample Type** Soil - ~~Subsurface~~ surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** KF 5/20/96

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** KCAB 3/19/96 ~~Russell Abell~~ Krish Begun

Composite Type: None **Signature** Krish Ca Begun

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01620	0	~~0~~ 1	KF 5/20/96 foot

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	GSCAN	5 Gal Polyethylene	None	1122-95-0013

Weather Clear, Sunny, Cool-58°F. Breeze from NE 0-10 mph.

Sample Description Loamy, silty soil, moderate organics (Roots, grass)

Field Screening Moderate tuff gravels. Light brown. Slightly moist.

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01620	0 to	0	FID	N/A	ppm	
33-01620	0 to	0	Field HE	N/A		
33-01620	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01620	0 to	0	Field Rad (beta/gam)	Background	cpm	
33-01620	0 to	0	PCB	N/A	ppm	
33-01620	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photos 14 & 15, Roll 1

Pushing the mower along the course.

Comments:

This sample collected is assumed to be "fairly clean" that is ~not radioactive although representative of the soil present in the berm. Soil was collected at the ~~Wern~~ Western-most toe of the berm.

KCAB 3/19/96

This soil had no elevated reading with the mower.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0166

Date 4/26/96 **Time** 1120 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** Clean Portion from SGS from day 1

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01622		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~& 125~~ ml Polyethylene	None	1122-96-~~0015~~ 2056

Weather Clear, Sunny, dry ~ 75° F Smoke filled sky from nearby fire

Sample Description med brown Sandy loam w/ 15% cobbles (mostly tuff)

Field Screening

Loc ID	Depth		Screening Method	Result		Units	Comments
33-01622	0 to	0	FID	NA		ppm	
33-01622	0 to	0	Field HE	NA			
33-01622	0 to	0	Field Rad (alpha)	10	bkg	cpm	
33-01622	0 to	0	Field Rad (beta/gam)	210	bkg	cpm	
33-01622	0 to	0	PID	NA		ppm	
33-01622	0 to	0	XRF	NA		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 2, photos 15, 16, 17 (photo 17 is catcher box showing Soil which was removed for SGS separation)

Comments:

Soil collected from the first batches of soil run through the SGS plant. (Unit #2). Total mass processed - 45151 kg (26 cy). Total activity of soil in stack is 5.16 pci/g (average).

Collected soil from stack - Put soil in decomned St. St. bowl, homogenized well w/ st. st. spoon.

Soil in pile averaged 5.16 pCi/g

descr: med. brown cobr sandy loam 15% cobbles (mostly tuff) ≤ 2" diameter, slightly moist, little organic material, small pieces of wood, metal, coal, brick, other debris. cobbles are not rounded and unsorted. Note: small pieces of oxidized uranium are visable in pile. Sample is from fill material

Sample submitted to DOE Lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0167

Date 5/1/96 Time 1419 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location Clean pile from 2nd day processing

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Linda Fluk

Composite Type: None Signature Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01623		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene	None	1122-96-~~0016~~ 0205

Weather Partly cloudy, windy (to SW) dry, sunny smoking from nearby fire

Sample Description med. brown sandy loam w/ 25% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01623	0 to	0	FID	NA	ppm	
33-01623	0 to	0	Field HE	NA		
33-01623	0 to	0	Field Rad (alpha)	10 bkg	cpm	
33-01623	0 to	0	Field Rad (beta/gam)	220 bkg	cpm	
33-01623	0 to	0	PID	NA	ppm	
33-01623	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #2, photos # 22, 23

Comments:

Soil was collected from the 2nd days batches of soil run through the SGS plant.
Collected soil from stack of soil - put soil in decontaminated bowl, homogenized well w/ spoon.
Soil in pile averaged approx. 5 pCi/g
Descr: Same as 0333-96-0166 Except:
% of cobbles ~ 25% - mostly tuff, some rounded cobbles of country rock. pieces up to 34" in diam (type desc. on computer)

Sample submitted to DOE lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0168

Date 5/1/96 **Time** 1438 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** clean soil from 3rd day processing.

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01624		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene 06 5/1/96	None	1122-96-~~0017~~ 2056 5/3/96

Weather Sunny w/ some clouds windy (to SW) dry smoky from nearby fire

Sample Description med. brown sandy loam w/ 25% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01624	0 to	0	FID	NA	ppm	
33-01624	0 to	0	Field HE	NA		
33-01624	0 to	0	Field Rad (alpha)	15 bkg	cpm	
33-01624	0 to	0	Field Rad (beta/gam)	250 bkg	cpm	
33-01624	0 to	0	PID	NA	ppm	
33-01624	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #2, photos 24, 25
Photo 26 is remaining soil in catcher box

Comments:
Soil collected from 3rd days processing through SGS plant. (soil in pile averaged 2.2 pCi/g) put soil in deconned bow homogenized w/s

Descr: Same as 0333-96-0167
(type desc. on computer)

Sample submitted to DOE lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0169

Date 5/2/96 Time 1545 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location clean soil - day ~~3~~ 4 WF 5/2/96

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Linda Fluk

Composite Type: None Signature Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01625		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene WF 5/2/96	None	1122-96-~~0018~~ 2056 5/30/96

Weather ~78°F, wind (SW) partly cloudy, sunny day

Sample Description med brown sandy loam w/ 25% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01625	0 to	0	FID	NA	ppm	
33-01625	0 to	0	Field HE	NA		
33-01625	0 to	0	Field Rad (alpha)	10 bkg	cpm	
33-01625	0 to	0	Field Rad (beta/gam)	195 bkg	cpm	
33-01625	0 to	0	PID	NA	ppm	
33-01625	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #2, photos 27, 28

Comments:

Sample is duplicate of 0333-96-0179
Soil collected from clean soil - ~~3rd~~ 4th day processing WF 5/2/96
Soil in pile averaged 10.7 pCi/gr.
Refer to soil descr. for 0333-96-0167
(type descr. on computer)
Sample submitted to DOE Lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0179

Date 5/2/96 Time 1545 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location Clean soil - day ~~3~~ 4 LF 5/2/96

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Linda Fluk

Composite Type: None Signature Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01635		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	~~None~~ ice LF 5/2/96	1122-96-~~0028~~ 9012 LF 5/2/96
~~02~~	~~METTAL~~	~~125 ml Polyethylene~~	~~ice~~	~~1122-96-0028~~

Did Not coll. LF 5/2/96

Weather ~78°F, windy (SW) partly cloudy sunny dry

Sample Description med. brown sandy loam w/ 25% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01635	0 to	0	FID	NA	ppm	
33-01635	0 to	0	Field HE	NA		
33-01635	0 to	0	Field Rad (alpha)	20 bkg	cpm	
33-01635	0 to	0	Field Rad (beta/gam)	205 bkg	cpm	
33-01635	0 to	0	PID	NA	ppm	
33-01635	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #2, photos 27, 28

Comments:

Sample is duplicate of 0333-96-0169 LF 5/2/96
Soil collected from clean pile - ~~3rd~~ 4th day processing
Soil in pile averaged 10.7 pCi/g
Refer to sample descr. for 0333-96-0167
(type descr. on computer)
Sample submitted to SMO

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0170

Date 5/3/96 Time 1440 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location clean soil from day 5 processing

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Linda Fluk

Composite Type: None Signature [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01626		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene	None	1122-96-~~0019~~ 2056

Weather ~ 78°F, Windy (SW) clear sunny dry

Sample Description med brown sandy loam w/ 15% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01626	0 to	0	FID	NA	ppm	
33-01626	0 to	0	Field HE	NA		
33-01626	0 to	0	Field Rad (alpha)	10 BKG	cpm	
33-01626	0 to	0	Field Rad (beta/gam)	205 BKG	cpm	
33-01626	0 to	0	PID	NA	ppm	
33-01626	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 3, # 4, 5

Comments: Soil in pile averaged approx 25.7 pCi/g. Soil collected from pile processed through SGS plant on 5th day of processing. Soil put in decon (st. st. bowl) & homogenized well w/ st. st. spoon.

Sample descr. as 0333-96-0166 (type descr. on computer)

Sample submitted to DOE lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0171

Date 5/6/96 **Time** 1505 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** clean soil processed from 6th day processing

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01627		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene	None	1122-96-~~0020~~ 2056

5/6/96 5/30/96

Weather Sunny, clear, slight breeze 78°F

Sample Description med brown sandy loam w/ 5% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01627	0 to	0	FID	NA	ppm	
33-01627	0 to	0	Field HE	NA		
33-01627	0 to	0	Field Rad (alpha)	10 bkg	cpm	
33-01627	0 to	0	Field Rad (beta/gam)	210 bkg	cpm	
33-01627	0 to	0	PID	NA	ppm	
33-01627	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 3, photos 7 & 8

Comments: soil in pile averaged 20.8 pCi/g. Sample collected from soil process through SGS plant on 6th day processing. Sample put in deconned st. st bowl, homogenized well w/ st. st spoon

Sample description as 0333-96-0166 EXCEPT the % cobbles is 5% w/ pieces up to 1" diameter.

(type descr. on computer)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0172

Date 5/7/96 **Time** 1238 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** clean portion from SGS from 7th day

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01628		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene	None	1122-96-~~0021~~2050

Weather ~78°F, windy (from SW), sunny, clear, dry

Sample Description med brown sandy loam w/ 15% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01628	0 to	0	FID	NA	ppm	
33-01628	0 to	0.	Field HE	NA		
33-01628	0 to	0	Field Rad (alpha)	15 bkg	cpm	
33-01628	0 to	0	Field Rad (beta/gam)	250 bkg	cpm	
33-01628	0 to	0	PID	NA	ppm	
33-01628	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #3, #9, 10

Comments:

Soil collected from soil run through SGS plant on 7th day of processing. (morning) Soil placed in deconned st. st. bowl & homogenized well w/ spoon.

Sample descr. as 0333-96-0166 (type into computer)

Sample sent to DOE lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0173

Date 5/7/96 **Time** 1425 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** clean portion from SGS from 7th day

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01629		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene	None	1122-96-~~0022~~ 2056

Weather ~ 80 °F wind from SW, dry, clear sunny

Sample Description red brown sandy loam w/ 15% pebbles

Field Screening

Loc ID	Depth		Screening Method	Result		Units	Comments
33-01629	0 to	0	FID	NA		ppm	
33-01629	0 to	0	Field HE	NA			
33-01629	0 to	0	Field Rad (alpha)	10	bkg	cpm	
33-01629	0 to	0	Field Rad (beta/gam)	≈40	bkg	cpm	
33-01629	0 to	0	PID	NA		ppm	
33-01629	0 to	0	XRF	NA		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #3, #s 13, 14

Comments:

Soil Collected from soil run through SGS plant on 7th day of processing. Soil placed in decomed st. st. bowl & homogenized well w/ spoon

descr. as 0333-96-0172 (type in to computer)
Sample submitted to DOE Lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0174

Date 5/8/96 **Time** 1200 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 1st day processed soil, re-run clean portion

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01630		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene	None	1122-96-0~~023~~ 2056

Weather 78°F Windy (from SW) clear sunny dry

Sample Description med brown sandy loam w/ 15% cobbles

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01630	0 to 0	FID	NA	ppm	
33-01630	0 to 0	Field HE	NA		
33-01630	0 to 0	Field Rad (alpha)	10 6kg	cpm	
33-01630	0 to 0	Field Rad (beta/gam)	185 6kg	cpm	
33-01630	0 to 0	PID	NA	ppm	
33-01630	0 to 0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 4, #, 3 & 4

Comments:

The entire pile which was processed on 1st day (4-26-96) was re-run. The 1st day average activity/mass was 5.16 pCi/g & the particle diversion was set at 100 pCi/g. Upon re-running the soil today, the average activ./mass was 19.7 pCi/g & the particle diversion was set at 30 pCi/g.

(Refer to sample 0333-96-0166 for pre sample processing info)

Desc. Refer to 0333-96-0166 for sample desc. (type into computer).

Note: Sample 0333-96-0180 is duplicate of this sample. This sample was analyzed at DOE lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0175

Date 5/8/96 **Time** 1300 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 6th day processed soil, re-run - Sampled clean pile

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01631		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene LF 5/8/96	None	1122-96-0~~024~~ 2056 LF 5/30/96

Weather ~80°F sunny, clear dry, Windy (for SW)

Sample Description med brown sandy loam w/ 10% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result		Units	Comments
33-01631	0 to	0	FID	NA		ppm	
33-01631	0 to	0	Field HE	NA			
33-01631	0 to	0	Field Rad (alpha)	10	bkg	cpm	
33-01631	0 to	0	Field Rad (beta/gam)	230	bkg	cpm	
33-01631	0 to	0	PID	NA		ppm	
33-01631	0 to	0	XRF	NA		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 3

Comments:

~5 Cy of soil which was processed on 5-6-96 (6th day processed soil) was re-run. The 6th day average activ./mass wass 20.8 pCi/g. Upon re-running the soil, the activ./mass was 25.7 pCi/g.
(Refer to sample 0333-96-0171 for pre sample, 6th day processing sample.

Descr. Refer to 0333-96-0171 (type into computer)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0176

Date 5/8/96 Time ~~10:30~~ 11:30 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location Hot bag re-run — Clean soil from re-run

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Linda Fluk

Composite Type: None Signature Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01632		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene	None	1122-96-~~0825~~ 2056

Weather ~78°F, Still sunny, dry, clear

Sample Description med brown sandy loam w/ 15% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01632	0 to	0	FID	NA	ppm	
33-01632	0 to	0.	Field HE	NA		
33-01632	0 to	0	Field Rad (alpha)	10 BKG	cpm	
33-01632	0 to	0	Field Rad (beta/gam)	205 BKG	cpm	
33-01632	0 to	0	PID	NA	ppm	
33-01632	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #3, photo 23

Comments:

Sample collected from clean pile after re-running a contaminated box of soil. The activity/mass of the average clean pile of soil (from which this sample was collected) was ~95 pCi/g. This soil may be run through CVL.

Descr. med brown sandy loam, slightly moist w/ little organic matter, pieces of oxidized ur are visible, ~15% cobbles ~ 1" diam. Cobbles are county material, tuff, coal, brick. Soil is fill material.

Sample submitted to DOE Lab in ABQ

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0180

Date 5/8/96 **Time** 1200 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 1st day processed soil re-run -clean portion

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01636		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	~~None~~ Ice	1122-96-~~0029~~ 9012
~~02~~	~~METTAL~~	~~125 ml Polyethylene~~	~~Ice~~	~~1122-96-0029~~ DID NOT collect

Weather ~78°F, sunny, clear, windy (from SW), dry

Sample Description med brown sandy loam w/ 15% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result		Units	Comments
33-01636	0 to	0	FID	NA		ppm	
33-01636	0 to	0	Field HE	NA			
33-01636	0 to	0	Field Rad (alpha)	15	bkg	cpm	
33-01636	0 to	0	Field Rad (beta/gam)	200	bkg	cpm	
33-01636	0 to	0	PID	NA		ppm	
33-01636	0 to	0	XRF	NA		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # ~~3~~ 4, #3, 4

Comments:

This sample is duplicate of 0333-96-0174

This sample is sent through SMO

descr. Refer to 0333-96-0166 for sample descr. (type into computer.)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0181

Date 5/8/96 Time 1545 Sample Type Soil - Surface East Catchersbox

Technical Area 33 Operable Unit 1122 Sample Location Comp. Sample

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Linda Fluk

Composite Type: None Signature Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01637		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	~~None~~ ice	1122-96-~~0030~~ 0012
~~02~~	~~METTAL~~	~~125 ml Polyethylene~~	~~Ice~~	~~1122-96-0030~~ LF 5/8/96

DID NOT collect

Weather ~80°F, windy (from SW) sunny clear, dry

Sample Description light brown sandy w/ <5% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01637	0 to	0.	FID	NA	ppm	
33-01637	0 to	0	Field HE	NA		
33-01637	0 to	0	Field Rad (alpha)	10 bkg	cpm	
33-01637	0 to	0	Field Rad (beta/gam)	230 bkg	cpm	
33-01637	0 to	0	PID	NA	ppm	
33-01637	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 4, photos 18, 19

Comments:

Sample collected from ground, 15 ft in from start of berm, & centerline w/ the ~~Western~~ EASTERN gun mount. LF 5/8/96 Brass tag placed outside area. Sample location is 265° & 31' 10" from tag. Location is from beneath location where projectiles were found on vertical face approx. 34 ft. from bldg 33-16. Note that projectiles were found approx 5 ft above ground surface - This material has been removed.

Sample descr. light brown sandy soil, compacted, dry, no organic mat., cobbles <5% <1" diam. pieces of wood (remains of bottom of catcher box floor).

Sample submitted to lab through SMO

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0182

Date 5/8/96 **Time** 1540

Technical Area 33 **Operable Unit** 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Sample Type Soil - Surface

Sample Location Nost catcher box conformat sample

Name (Print) Linda Fluk

Signature Linda Fluk

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01638		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	~~None~~ ice	1122-96-0031
~~02~~	~~METTAL~~	~~125 ml Polyethylene~~	~~Ice~~	~~1122-96-0031~~

5/7/96 5/7/96

Weather ~80 °F, windy (from SW) sunny, clear dry

Sample Description light - med brown sandy soil w/ <5% cobbles

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01638	0 to 0	FID	NA	ppm	
33-01638	0 to 0	Field HE	NA		
33-01638	0 to 0	Field Rad (alpha)	10 bkg	cpm	
33-01638	0 to 0	Field Rad (beta/gam)	195 bkg	cpm	
33-01638	0 to 0	PID	NA	ppm	
33-01638	0 to 0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 4, photo #17

Comments:

Sample collected on ground 15 ft in from start of berm, centerline w/ western ~~w/ eastern~~ gun mount. Brass tag placed outside area. Sample loc is 263° and 43' 4" from tag.
Location is beneath location where projectiles were found on verticle face approx 34 ft. from concrete gun mount (west of bldg 33-16). Note the projectiles were found approx. 5 ft. above ground surface. - This material has been removed.
Sample descr. light-med brown sandy soil, compacted w/ pieces of concrete & cobbles, dry, no organic mat.

Sample submitted to lab through SMO

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0183

Date 5/8/96 **Time** 1622

Technical Area 33 **Operable Unit** 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Sample Type Soil - Surface

Sample Location West Catcher box confirmation sample

Name (Print) Linda Fluk

Signature Linda Fluk

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01639		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	~~None~~ ice	1122-96-0032 9012
~~02~~	~~METTAL~~	~~125 ml Polyethylene~~	~~Ice~~	~~1122-96-0032~~

LF 5/8/96 Did not

Weather ~80°F, windy (from SW) clear sunny, dry

Sample Description light brown sand w/ little concrete pieces

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01639	0 to	0	FID	NA	ppm	
33-01639	0 to	0	Field HE	NA		
33-01639	0 to	0	Field Rad (alpha)	10 bkg	cpm	
33-01639	0 to	0	Field Rad (beta/gam)	200 bkg	cpm	
33-01639	0 to	0	PID	NA	ppm	
33-01639	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 4, photo # 20

Comments: Sample at location on ground where 2 projectiles were found in ground - at the western catcher box. Proj. fired down into grnd. 216° 36' 3" from brass tag

Note these projectiles were not radioactive on outside surface.

Sample descr. light brown sandy soil, dry, no organic material, very compacted, pieces of concrete

Sample submitted to lab through SMO

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0184

Date 5/8/96 **Time** 1630

Technical Area 33 **Operable Unit** 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Sample Type Soil - Surface

Sample Location Betw. Eastern & Western catchers boxes, confirmation sample

Name (Print) Linda Fluk

Signature Linda Fluk

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01640		0	6		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	ice	1122-96-~~0033~~ 9012 LF 5/20/96

Weather ~80°F, windy (from SW), sunny, clear, dry

Sample Description light brown sandy soil w/ pieces of concrete

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01640	0 to	6	FID	NA	ppm	
33-01640	0 to	6	Field HE	NA		
33-01640	0 to	6	Field Rad (alpha)	15 bkg	cpm	
33-01640	0 to	6	Field Rad (beta/gam)	250 bkg	cpm	
33-01640	0 to	6	PID	NA	ppm	
33-01640	0 to	6	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 4, photo 21

Comments:

Sample collected from center of catcher boxes - on the ground. Brass tag placed outside area. Sample location is 213°, 30'6" from tag. Location is beneath a hot spot found betw. the 2 catcher boxes (same hot spot detected during 1994 excavation).

Sample descr. light brown sandy soil, compacted, pieces of concrete, dry, no organic mat.

Sample submitted to lab through SMO

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0185

Date 5/8/96 **Time** 1645 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** Vertical face - beneath project eastern catchment box

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01641		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	Ice	1122-96-~~0034~~ 9012 LF 5/20/96

Weather ~80°F, windy (from SW), sunny, clear, dry

Sample Description ~~White to tan tuff~~ (LF 5/20/96) unconsolidated
caliche or hard pan

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01641	0 to	0	FID	NA	ppm	
33-01641	0 to	0	Field HE	NA		
33-01641	0 to	0	Field Rad (alpha)	10 bkg	cpm	
33-01641	0 to	0	Field Rad (beta/gam)	210 bkg	cpm	
33-01641	0 to	0	PID	NA	ppm	
33-01641	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 4, photos 21, 22

Comments:

Sample collected from vertical face after excavation thought near complete. Native material is out cropping below w/ fill still on top. Projectile found in this face (4½" OD, 1 ft long). Sample collected from fill/tuff directly beneath where the projectile was removed. Proj. found in ~~tuff~~ caliche (LF 5/20/96) was rust stained. Found in eastern catcher box. Sample descr. white to tan colored caliche ~~tuff~~ (LF 5/20/96), unconsolidated, weathered. Large pieces of tuff are intermixed in w/ soil & fill. Sample just from ~~tuff~~ (LF 5/20/96) caliche

Sample sent to lab through SMO

Location of cut is approx 39 ft. in from bldg 33-16.

0940 mo
1000 dig

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0186

Date ~~5/9/96~~ 5/10/96 KH

Time 0935

Sample Type Soil

Technical Area 33 Operable Unit 1122

Sample Location see below

QA/QC Type None

Composite: ○ Yes ◉ No

Name (Print) Kenny Hansel ~~Linda Pluk~~ KH 5/10/96

Composite Type: None

Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01642		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	Ice	1122-96-~~0035~~ 9012 KH 5/10/96

Weather Clear, Wind 5-10 mph, 70°

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01642	0 to	0	FID	NA	ppm	
33-01642	0 to	0	Field HE	NA		
33-01642	0 to	0	Field Rad (alpha)	bkg	cpm	
33-01642	0 to	0	Field Rad (beta/gam)	bkg	cpm	
33-01642	0 to	0	PID	NA	ppm	
33-01642	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 1, 2, 3 Roll "A"

Comments:

Soil sample collected from area around the projectile found just under the juniper tree. Approx. (4 ft) (depth) into the fill materi. or 6 ft up from ground level (cement pad) (see photo 1, 2 Roll "A"), two ft above cinder mate

Soil is med brown, sandy loam, 15% cobbles (mostly tuff), dry, 1:1 the organic material

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0187

Date 5/9/96 **Time** 1110 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenny Hansel ~~Linda Fluk~~

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01643		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	Ice	1122-96-~~0036~~ 9012

Weather Sunny, Wind 5-8 mph 75°, dry

Sample Description see below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01643	0 to 0	FID	N/A	ppm	
33-01643	0 to 0	Field HE	N/A		
33-01643	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01643	0 to 0	Field Rad (beta/gam)	BKGR.	cpm	220 cpm
33-01643	0 to 0	PID	N/A	ppm	
33-01643	0 to 0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 4, 5, 6

Comments:

Sample location: around projectile located approx. 2-3 ft above grou level and ~~72 ft in~~ KH 5/10/96 see photo # 4+5 Roll "A" same depth in as the projectile fo

Soil description: Projectile is embedded in the cinders Soil is a very rusty-colored brown, semi-moist, Mostly 1" diameter cinders (basalt) with intermixed minor silts and silica crystals. Moderate gravels of basalt. Minor to moderate sands.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0188

Date 5/9/96 **Time** 1435 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ 5/14/96 Kristi Begwin

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01644		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	Ice	1122-96-~~0037~~ 9012 5/20/96

Weather Hot - 80°F light breeze from the West 0-5mph. Clear, Sunny

Sample Description Major Cinders and sand. Major cinder gravels

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01644	0 to 0	FID	N/A	ppm	
33-01644	0 to 0	Field HE	N/A		
33-01644	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01644	0 to 0	Field Rad (beta/gam)	250	cpm	background
33-01644	0 to 0	PID	N/A	ppm	
33-01644	0 to 0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):
Photos 7, 8, 9, 10, 11, 12 Of area projectiles found and projectiles

Comments: Soil: About 1"-2" diameter. Moderate cinder pebbles All are subangular to angular. Minor silica crystals All dark brown, Moist from moistening soil for dust suppression. Slight Rusty Reddish color.

Location: 2.5 to 3 ft. above ground level approx. 42 feet into the berm. Native cinder material.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0177

Date 5/13/96 **Time** 1440 **Sample Type** Soil - Surface Rad leach bag

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01633		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	250 ~~125~~ ml Polyethylene	None	1122-96-~~0826~~ 2056

5/13/96 LF LF 5/30/96

Weather ~82°F Windy (from SW) partly cloudy, dry

Sample Description med. brown sandy loam w/ 20% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01633	0 to	0	FID	NA	ppm	
33-01633	0 to	0	Field HE	NA		
33-01633	0 to	0	Field Rad (alpha)	10 bkg LF 5/13/96	cpm	LF 5/13/96
33-01633	0 to	0	Field Rad (beta/gam)	1580 ~~NAI~~ bkg	cpm	
33-01633	0 to	0	PID	NA	ppm	
33-01633	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 6 # 13, 14

Comments:

Sample collected from CVI bag #3 Front of bag, top of bag
Counts w/ NAI E600 = 31.4K γ/B for 1 min. count
Sample descr. med brown colored soil, sandy loam, slightly moist, little organic mat., ~20% cobbles, mostly tuff, some country rock, rounded cobble, brick, coal. Matrix is fill mat. Piece of oxidized uranium in sample is approx. 1 inch diameter. Small pieces of oxidized uranium.

Sample submitted to DOE lab for Isanalyses

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0178

Date 5/13/96 Time 1450 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location rad leach bag

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Linda Fluk

Composite Type: None Signature Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01634		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	2 50 ~~125~~ ml Polyethylene	None	1122-96-~~0027~~ 2056

5/13/96 5/30/96

Weather ~82°F, windy (from SW) partly cloudy day

Sample Description med brown sandy loam w/ 20% cobbles

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01634	0 to	0	FID	NA	ppm	
33-01634	0 to	0	Field HE	NA		
33-01634	0 to	0	Field Rad (alpha)	bkg	cpm	
33-01634	0 to	0	Field Rad (beta/gam)	1,420	cpm	
33-01634	0 to	0	PID	NA	ppm	
33-01634	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #6, # 15, 16

Comments: Sample collected from CVL bay #3 back of bag, top of bag.
Count w/NAI E600=14.80K cpm α/β for 1min. count.
Sample descr. refer to 0333-96-0177
Except NO large piece of oxidized uranium.
(type into computer)

Sample submitted to DOE lab for IU analysis

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0003

Date 5/15/96 **Time** 0910 **Sample Type** Soil - Surface 33-008(a)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1531

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KMB 7/17/96

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01531		0	0 to 1	ft.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	1122-96-0055
02	METTAL	125 ml Polyethylene	Ice	1122-96-0055
03	SEMI	125 ml Glass	Ice	1122-96-0055
04	TU	125 ml Polyethylene	None	1122-96-0055

Weather Clear, Sunny, Hot 78°F. No breeze

Sample Description All fill material See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01531	0 to 0	FID	N/A	ppm	
33-01531	0 to 0	Field HE	N/A		
33-01531	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01531	0 to 0	Field Rad (beta/gam)	182	cpm	17,440 NaI_2
33-01531	0 to 0	PID	Bkgr.	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photos 24, 23, 22, 21, 20 last Roll of the SGS Film. Dated 5/15/96
Photos are of core barrel and sample in the bowl

Comments:

First hole in the NE Quadrant of Landfill grid.

Soil description: tll minor sands and major silts, moderate tuff gravels - 20%, minor organics. Very dry. Very light beige-brown.

Collected from 0 to 1 foot depth.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0004

Date 5/15/96 **Time** 0930 **Sample Type** Soil - ~~Surface~~ Subsurface KCAB 7/17/96

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1531

QA/QC Type None 33-008(a)

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KCAB 7/17/96

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01531		0	2.5 - 3.0	Ft	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0056~~ 6/13/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0056~~ 1122-96-0055
03	SEMI	125 ml Glass	Ice	~~1122-96-0056~~
04	TU	125 ml Polyethylene	None	~~1122-96-0056~~

Weather Same as 0333-96-0003

Sample Description Mostly fill material and minor tuff gravels (see below)

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01531	0 to 0	FID	N/A	ppm	
33-01531	0 to 0	Field HE	N/A		
33-01531	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01531	0 to 0	Field Rad (beta/gam)	195	cpm	16,450 NAI$_2$
33-01531	0 to 0	PID	0	ppm	
33-01531	0 to 0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):
Roll #1 of Phase I & II Activies, Photos # 1, 2,

Comments: Moderate tuff gravels and pebbles, moderate silts with minor intermixed sands. Very fine, dry material. Light ~~beigh~~ KCAB 5/13/96 beige brown.
This sample collected from 2.5 to 3.0 feet depth.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0005 Sub-

Date 5/15/96 Time 0935 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) ~~Linda Fluk~~ KCB 7/17/96

Composite Type: None Signature Kristal Begnin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01531		0 3.0	0 3.5	ft.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0057~~
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0057~~ 1122-96-0058
03	SEMI	125 ml Glass	Ice	~~1122-96-0057~~
04	TU	125 ml Polyethylene	None	~~1122-96-0057~~

Weather Same as 0333-96-0003

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01531	0 to	0	FID	N/A	ppm	
33-01531	0 to	0	Field HE	N/A		
33-01531	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01531	0 to	0	Field Rad (beta/gam)	185	cpm	17,100 NaI_2
33-01531	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photos 3 & 4 Roll 1

Comments:

This sample was collected from 3.0 to 3.5 feet depth, the soil is immediately above the tuff. The tuff begins right at 3.5 feet. This is the bottom surface of the landfill.

Soil description: Very fine silts and moderate intermixed sands. Minor tuff gravels (subangular to subrounded), Minor organics (chamisa roots). Moderate tuff pebbles. Very dry light brown color

No debris in the sample.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0006

Date 5/15/96 **Time** 0955 **Sample Type** Sub-Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KCAB 7/17/96

Composite Type: None **Signature** Kristen Bergin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01531		4.0	5.0	ft.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0058~~ 1122-96-0055 6/19/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0058~~ 1122-96-0055
03	SEMI	125 ml Glass	Ice	~~1122-96-0058~~ 1122-96-0055
04	TU	125 ml Polyethylene	None	~~1122-96-0058~~ 1122-96-0055

Weather Same as 0333-96-0003

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01531	0 to 0	FID	N/A	ppm	
33-01531	0 to 0	Field HE	N/A		
33-01531	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01531	0 to 0	Field Rad (beta/gam)	195	cpm	16,220 Na 12
33-01531	0 to 0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 5 & 6 Roll 1

Comments: Soil: This sample is being collected from the last profile in the core at 4.0 to 5.0 feet total depth. Soil consists of all weathered tuff, light pinkish brown. Minor fractural inclusions (organics), minor phenocrysts. Some pumice lenses <3%. Very dry. This sample is exactly from 1 foot to 2 feet into the tuff. Total depth of hole 5 feet.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0007

Date 5/16/96 **Time** 0905 **Sample Type** Soil - Surface Sub 33-008(a)

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ LAB 7/17/96

Composite Type: None **Signature** [illegible]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01532		0	to 1 ft. 0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	1122-96-0059
02	METTAL	125 ml Polyethylene	Ice	1122-96-0059
03	SEMI	125 ml Glass	Ice	1122-96-0059
04	TU	125 ml Polyethylene	None	1122-96-0059

Weather Clear, Sunny, Hot - 79°F. Breeze from the SW 0-8mph.

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01532	0 to 0	FID	N/A	ppm	
33-01532	0 to 0	Field HE	N/A		
33-01532	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01532	0 to 0	Field Rad (beta/gam)	145	cpm	14,320 NaI2
33-01532	0 to 0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 25, Roll 1 of the core
Photo 1, Roll 2,

Comments:

Soil: Mostly fine sands and silts. Moderate tuff gravels and moderate tuff pebbles. Minor engineering fill pebbles. Moderate crushed wood pieces, some up to 4" long by 1" wide. No creosote in the wood. No organics. Very dry. light brown color, pinkish beige.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0008

Date 5/16/96 **Time** 0915 **Sample Type** Soil - Sub-Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ 7/17/96

Composite Type: None **Signature** Kristi Bregnin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01532		~~1 to 2.0 ft.~~ 1.	0 to 2.5ft.		0		

KCAB 5/16/96

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0060~~ 6/17/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0060~~
03	SEMI	125 ml Glass	Ice	~~1122-96-0060~~ 1122-96-0059
04	TU	125 ml Polyethylene	None	~~1122-96-0060~~

Weather Same as 0333-96-0007

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01532	0 to	0	FID	N/A	ppm	
33-01532	0 to	0	Field HE	N/A		
33-01532	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01532	0 to	0	Field Rad (beta/gam)	180	cpm	15,330 NaI2
33-01532	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 2, Photo 1 & 2

Comments: Soil; This sample was Right above the tuff interface. Tuff began Right at 2.5 feet.

Soil is Mostly fine sands and silts, moderate tuff gravel and pebbles, minor engineering fill gravels. A very few pieces of crushed wood. 1cm³ in size crushed from drilling. A max. of 3 pieces of wood in sample. Very light pinkish brown. Very dry.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0009

Date 5/16/96 **Time** 0920 **Sample Type** Soil - Sub-Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KCB 7/17/96

Composite Type: None **Signature** Kristina Bergman

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01532		2.5	0 to 3.5	0 ft.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0061~~ RH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0061~~
03	SEMI	125 ml Glass	Ice	~~1122-96-0061~~ 1122-96-0059
04	TU	125 ml Polyethylene	None	~~1122-96-0061~~

Weather Same as 0333-96-0007

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01532	0 to	0	FID	N/A	ppm	
33-01532	0 to	0	Field HE	N/A		
33-01532	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01532	0 to	0	Field Rad (beta/gam)	190	cpm	16,210 NaI2
33-01532	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 3 & 4 of the core in barrel.
Roll 2

Comments:

Soil sample is being collected right at the fill/tuff interface
All crushed tuff. Pink, very dry.
Moderate phenocrysts - 25%. Moderate ~~tuf~~ pumice lenses approx. 5" diameter.

5/16/96 KCB

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0010

Date 5/16/96 **Time** 0930 **Sample Type** Sub-Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ 7/17/96

Composite Type: None **Signature** Kristi A Begin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01532		4.0	5.0	ft.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	1122-96-0062 KH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	1122-96-0062
03	SEMI	125 ml Glass	Ice	1122-96-0062 1122-96-0059
04	TU	125 ml Polyethylene	None	1122-96-0062

Weather Same as 0333-96-0007

Sample Description Same as 0333-96-0009

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01532	0 to	0	FID	N/A	ppm	
33-01532	0 to	0	Field HE	N/A		
33-01532	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01532	0 to	0	Field Rad (beta/gam)	160	cpm	16,730, NaI2
33-01532	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photos # 3&4, Roll 2

Comments: Sample was collected from 4.0 to 5.0 ft.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-~~0007~~ 0011 sub- KAB 5/15/96

Date 5/15/96 **Time** 1040 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Flak~~ 7/17/96

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-~~01532~~	1533	0	1 ft.		0		

KAB 5/15/96

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0059~~ KH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0059~~
03	SEMI	125 ml Glass	Ice	~~1122-96-0059~~ 1122-96-0055
04	TU	125 ml Polyethylene	None	~~1122-96-0059~~

Weather Same as 0333-96-0003

Sample Description All fill material. See below.

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01532~~3~~	0 to	0	FID	N/A	ppm	
33-01532~~3~~	0 to	0	Field HE	N/A		
33-01532~~3~~	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01532~~3~~	0 to	0	Field Rad (beta/gam)	200	cpm	17,240 NaI2
33-01532~~3~~	0 to	0	PID	0	ppm	

KAB 5/15/96

Photo (Roll, Frame, Azimuth, Subject, Participants):

#10 & 11, Roll 1 See photos 7, 8, & 9 to see fencing wrapped around auger flight.

Comments:

Soil: Fill material. Moderate tuff pebbles, minor tuff gravels. Mostly silts with moderate intermixed fine sands.

Moderate organics - sagebrush roots & branches. Very dry light beige brown color.

This borehole is in the SE Quadrant of landfill grid.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-00~~08~~ 12

Date **Time** 1155 **Sample Type** Soil - Surface SUB- KAB 5/15/96

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KAB 7/17/96

Composite Type: None **Signature** Krish Cathryn

Grabs:

	Location ID	Stake ID	Start	Depth	End	Depth	Units	Vol	Units	Comments
1	33-01532~~3~~ KAB 5/15/96	1533	2.5	0	to 5	0	ft.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Contalner	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0060~~ KH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0060~~
03	SEMI	125 ml Glass	Ice	~~1122-96-0060~~ 1122-96-0055
04	TU	125 ml Polyethylene	None	~~1122-96-0060~~

Weather Hot - 82°F. Slight breeze from West 0-5mph. Ptly. Sunny.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01532~~3~~	0 to	0	FID	NA	ppm	
33-01532~~3~~	0 to	0	Field HE	N/A		
33-01532~~3~~	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01532~~3~~	0 to	0	Field Rad (beta/gam)	200	cpm	17,750 NaI2
33-01532~~3~~	0 to	0	PID	0	ppm	

KAB 5/15/96

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 13, Sample in the bowl

(Photo 12 also?) KAHC

Comments: Mostly tuff and minor fill gravels and pebbles Moderate fine sands and silts. Minor organics (sagebrush roots) light brown. Very dry.

We found a rotted 2x4 timber at about 2.5 - 3.0 ft. and this sample is representative of the soil from this location. The 2x4 was 2.5 ft. long.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-00~~09~~13

Date 5/15/96 **Time** 1205 **Sample Type** Sub-Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Flux~~ 7/17/96

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01532~~3~~ KCAB 5/15/96		0 7.5 to	0 10 ft.		0	depth	

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0061~~ KH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0061~~
03	SEMI	125 ml Glass	Ice	~~1122-96-0061~~ 1122-96-0055
04	TU	125 ml Polyethylene	None	~~1122-96-0061~~

Weather Same as 0333-96-0012

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01532	0 to	0	FID	NA	ppm	
33-01532	0 to	0	Field HE	N/A		
33-01532	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01532	0 to	0	Field Rad (beta/gam)	220	cpm	17,430 Na 1/2
33-01532	0 to	0	PID	0	ppm	

KCAB 5/15/96

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 14, Roll 1, Sample in the bowl. With large cobbles in soil. The photo before the next one which has bag in photo.

Comments:

Soil is very fine sands and silts with moderate tuff pebbles and minor tuff gravels. Minor engineering fill pebbles. Light brown color, very dry.

This sample was collected from 7.5 to 10 feet depth. This soil is representative of the material at the very bottom of the landfill setting upon the tuff. Tuff was hit at approx. 11 feet.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-00~~10~~ 14 sub -

Date | **Time** 1210 | **Sample Type** Soil - Surface

Technical Area 33 | **Operable Unit** 1122 | **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No | **Name (Print)** ~~Linda Fluk~~ 7/17/96

Composite Type: None | **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01532~~3~~		~~10.5~~	~~to~~	~~0 12 ft.~~	0	KAAB	

KAAB 5/15/96 10 to 12.5 ft.

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0062~~ K4
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0062~~ 1122-96-0055
03	SEMI	125 ml Glass	Ice	~~1122-96-0062~~
04	TU	125 ml Polyethylene	None	~~1122-96-0062~~

Weather Same as 0333-96-0012

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01532~~3~~	0 to	0	FID	N/A	ppm	
33-01532~~3~~	0 to	0	Field HE	N/A		
33-01532~~3~~	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01532~~3~~	0 to	0	Field Rad (beta/gam)	210	cpm	17,430 NaI_2
33-01532~~3~~	0 to	0	PID	0	ppm	

KAAB 5/15/96

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #15 w/ Sample bag.

Comments: All crushed, powdered Qbt tuff. light pinkish brown color. Powdered from drilling.
Tuff was hit at approx. 11 feet. depth
This sample is 1.5 feet into the tuff layer and is representative of the ~~Fo~~ 1-2 feet into tuff sample.
There was no debris in the soil

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0015 Sub- 33-008(a)

Date 5/15/96 **Time** 1430 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Flynk~~ LCAB 7/17/96

Composite Type: None **Signature** Kristi Gallegos

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01534		2.5 0	to 3.5 0	ft.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0063~~ KH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0063~~
03	SEMI	125 ml Glass	Ice	~~1122-96-0063~~ 1122-96-0055
04	TU	125 ml Polyethylene	None	~~1122-96-0063~~

Weather Clear, Hot 90°F Winds from NW 5-10mph High Cirrus clouds.

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01534	0 to	0	FID	N/A	ppm	
33-01534	0 to	0	Field HE	N/A		
33-01534	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01534	0 to	0	Field Rad (beta/gam)	190	cpm	16430, NaI2
33-01534	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 16, 17, 18 Roll 1

Comments: This borehole is in the SW Quadrant of the landfill.

Soil: Crushed tuff with moderate tuff pebbles and minor tuff gravels. Pieces of crushed timber, approximately 1 cm³ ~~diameter~~ LCAB 5/15/96 size. Soil is very dry, light beige brown color.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0016

Date 5/15/96 **Time** 1440 **Sample Type** Sub-Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ LCAB 7/17/96

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01534		~~5.5~~ 5.0	~~0 to 0~~ to 6.0	~~ft~~ ft,	0	ft,	

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	1122-96-0064 KH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	1122-96-0064
03	SEMI	125 ml Glass	Ice	1122-96-0064 1122-96-0055
04	TU	125 ml Polyethylene	None	1122-96-0064

Weather Same as 0333-96-0015

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01534	0 to	0	FID	N/A	ppm	
33-01534	0 to	0	Field HE	N/A		
33-01534	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01534	0 to	0	Field Rad (beta/gam)	210	cpm	17,100 Na I 2
33-01534	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 19, 20, 21 Screwdriver shows where tuff begins

Comments: Soil: Mostly crushed tuff, with tuff pebbles and gravels. Moderate pieces of crushed timber. All dark, rotten in color. All the timber is full of creosote and is very smelly. Light pinkish brown, very dry. Minor silts.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0017

Date 5/15/96 Time 1450 Sample Type Sub-Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) ~~Linda Flak~~ 7/17/96

Composite Type: None Signature [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01534		6 0	to 0	7 ft	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	1122-96-0065 KH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	1122-96-0065
03	SEMI	125 ml Glass	Ice	1122-96-0065 1122-96-0055
04	TU	125 ml Polyethylene	None	1122-96-0065

Weather Same as 0333-96-0015

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01534	0 to	0	FID	N/A	ppm	
33-01534	0 to	0	Field HE	N/A		
33-01534	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01534	0 to	0	Field Rad (beta/gam)	250	cpm	16,350, NaI$_2$
33-01534	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 20 & 21 Screwdriver shows interface

Comments: Soil: Crushed tuff and minor silts and sands. Moderate tuff pebbles and gravels. Moderate crushed creosote timbers. This sample is being collected as the bottom of the landfill sample. The tuff interface begins right at 7 feet. This sample is being collected from 6 to 7 ft. Very dry. Light brown color.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0018

Date 5/15/96 **Time** 1500 **Sample Type** Sub-Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KAB 7/17/96

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01534		0	8.5 to 10	ft.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	~~1122-96-0066~~ RH 6/13/96
02	METTAL	125 ml Polyethylene	Ice	~~1122-96-0066~~
03	SEMI	125 ml Glass	Ice	~~1122-96-0066~~ 1122-96-0055
04	TU	125 ml Polyethylene	None	~~1122-96-0066~~

Weather Same as 0333-96-0015

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01534	0 to	0	FID	N/A	ppm	
33-01534	0 to	0	Field HE	N/A		
33-01534	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01534	0 to	0	Field Rad (beta/gam)	240	cpm	17,000 NaI2
33-01534	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 22, 23, 24

Comments:

Soil: All crushed, powdered Qbt tuff. Light pinkish brown. Moderate phenocrysts 5-10%. Many pumice lenses. Tuff is mildly compacted, although mostly crushed

Tuff began right at 7 ft. When we went back into the hole a bit of slough fell into the hole and we could see the obvious slough in the core barrel. We collected the soil from 8.5 to 10 ft, where there was an obvious compaction to the tuff.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0042

Date 5/16/96 **Time** 1445 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01540		6.0	7.0	Ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0067
02	SEMI	125 ml Glass	Ice	1122-96-0067
03	TU	125 ml Polyethylene	None	1122-96-0067

Weather Same as 0333-96-0035

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01540	0 to	0	FID	N/A	ppm	
33-01540	0 to	0	Field HE	N/A		
33-01540	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01540	0 to	0	Field Rad (beta/gam)	310	cpm	18,970 NaI2
33-01540	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 14 of core
Roll #2

Comments:

Soil: All Qbt tuff Moderate phenocrysts about 20%, Moderat pumice lenses - approx 1cm - 2cm diameter. Pinkish brown color a nice weathered layer was at 5-6 ft. depth - whitish tuff bands.
The area of the core sampled had slightly elevated Readings for Radioactivity. Sustained above 300 cpm on B/G dry.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0300

Date May ~~20~~ 21, 1996 KRS 5/21/96 | Time 1445 | Sample Type Soil - Subsurface

Technical Area 33 | Operable Unit 1122 | Sample Location 33-1745 003(b)

QA/QC Type None

Composite: ○ Yes ◉ No | Name (Print) Kristi Beguin

Composite Type: None | Signature Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth		End Depth	Units	Vol	Units	Comments
1	33-01745		4.5	to	5.0	0	ft	0	

These Samples were collected using LANL ER SOP 04.01

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-0100
02	METTAL	125 ml Polyethylene	Ice	1122-96-0100

Weather Hot - 85°F, Clear but very hazy skies (due to smoke) and Windy from the W 10-25

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01745	0 to	0	FID	N/A	ppm	
33-01745	0 to	0	Field HE	N/A		
33-01745	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01745	0 to	0	Field Rad (beta/gam)	N/A	cpm	13,430 Na/2
33-01745	0 to	0	PID	N/A	ppm	
33-01745	0 to	0	XRF	N/A	ppm	

PCB Screening <.1 ppm with D-Tech Soil test Kit

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# Photo# 4

Roll #3

Comments:

Soil description: All tuff. Hit tuff at 2.5 feet depth. Highly compacted. Pinkish brown color. Abundant phenocrysts. Minor pumice lenses - brown to gray color. Minor white pumice fragments.

Location: Borehole is on the North side of the elevator shaft. Ground is level. Parts of the concrete apron are still visible. Much chamisa, grama grass, and engineering fill gravel present on ground surface.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0301

Date May ~~20,~~ 21 1996 **Time** 0913 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1745 003 (b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01745		9 to	10 ft.		0	0	

These Samples were collected using LANL ER SOP 04.01

ID	Analysis	Container	Preservative	C of C Control No.
~~01~~	~~PCB~~	~~125 ml Glass~~	~~None~~	~~1122-96-0100~~ ~~5/2/96~~
02	METTAL	125 ml Polyethylene	Ice	1122-96-0100

Weather Clear, Cool - 68°F. Breezy from SW - 0-8 mph. Hazy skies

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01745	0 to	0.	FID	N/A	ppm	
33-01745	0 to	0	Field HE	N/A		
33-01745	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01745	0 to	0	Field Rad (beta/gam)	N/A	cpm	13,300 NaI2
33-01745	0 to	0	PID	0	ppm	
33-01745	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 6
Roll# 3

Comments:

Soil: All tuff. Highly compacted, dense tuff. Moderate phenocryst 10-20% - smoky gray color. Moderate pumice lenses - up to 2-3" in length and .5" diameter - white to light gray color. Abundant dense lithics present - appear to be a highly welded tuff or basalt, (Dark Reddish/greenish brown) Tuff is mostly pink-brown. Very dry.

Location: Same as 0333-96-0300

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0302

Date May ~~20~~ 21, 1996 KCAB 5/21/96 **Time** 1033 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1745 003(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start	Depth	End Depth	Units	Vol	Units	Comments
1	33-01745		14 to 15	0	ft.	0	0		

These Samples were collected using LANL ER SOP 04.01

ID	Analysis	Container	Preservative	C of C Control No.
~~01~~	~~PCB~~	~~125 ml Glass~~	~~None~~	~~1122-96-0100~~
02	METTAL	125 ml Polyethylene	Ice	1122-96-0100

cf 5/21/96

Weather Same as 0333-96-0301

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01745	0 to	0	FID	N/A	ppm	
33-01745	0 to	0	Field HE	N/A		
33-01745	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01745	0 to	0	Field Rad (beta/gam)	N/A	cpm	13,500 NaI2
33-01745	0 to	0	PID	N/A	ppm	
33-01745	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo#: 7

Roll#: 3

Comments:

Soil: Same as 0333-96-0301 except tuff is slightly less pink ~ slightly whitish-gray color.

Location: Same as 0333-96-0300

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0303

Date May ~~20,~~ 21 1996 LCB 5/22/96 **Time** 1514 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1746 003(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01746		0 to 1.50	feet	0	0		.

These Samples were collected using LANL ER SOP 04.01

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-0100
02	METTAL	125 ml Polyethylene	Ice	1122-96-0100

Weather Hot - 85°F, Windy - from SW 5-15 mph. Hazy skies.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01746	0 to	0	FID	N/A	ppm	
33-01746	0 to	0	Field HE	N/A		
33-01746	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01746	0 to	0	Field Rad (beta/gam)	N/A	cpm	12,500 NaI2
33-01746	0 to	0	PID	N/A	ppm	
33-01746	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 8 Wrong location ID in Photo say 33-1745
Roll # 3 it is 1746

Comments:

Soil: Mostly silts and fine sands. Moderate tuff gravels and minor eng. fill pebbles. Minor organics - roots, grasses. Light brown color - very dry.

Location: Borehole on East end of shaft. Much Chamisa, grasses

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0304

Date May ~~20~~ 21 1996 Time 1620 Sample Type Soil - Subsurface

Technical Area 33 Operable Unit 1122 Sample Location 33-1746 003(b)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01746		4 to 5 ft	.0		0		

These Samples were collected using LANL ER SOP 04.01

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-0100
02	METTAL	125 ml Polyethylene	Ice	1122-96-0100

Weather Same as 0333-96-0303

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01746	0 to	0	FID	N/A	ppm	
33-01746	0 to	0	Field HE	N/A		
33-01746	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01746	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01746	0 to	0	PID	N/A	ppm	12,100 No 12
33-01746	0 to	0	XRF	N/A	ppm	

PCB screening <.5ppm

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 9

Roll # 3

Comments:

Soil: All pink tuff. Major phenocrysts present, large pumice lenses - unwelded - brown to light gray in color. Moderate lithics presents - welded tuff or basalt small (approx 1-3cm diameter). Dry. Very soft tuff minorly compacted to powdery. Hit a harder layer of tuff at 5.0 feet.

Location: Same as 0333-96-0303

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0305

Date May ~~20~~ 22 1996 Time 1045 Sample Type Soil - Subsurface

Technical Area 33 Operable Unit 1122 Sample Location 33-1746 003(b)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01746		10	to 11.5	ft.	0		

These Samples were collected using LANL ER SOP 04.01

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-0100
02	METTAL	125 ml Polyethylene	Ice	1122-96-0100

Weather Clear, Windy - winds from NW 5-10 mph, Warm - 85°F

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01746	0 to	0	FID	N/A	ppm	
33-01746	0 to	0	Field HE	N/A		
33-01746	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01746	0 to	0	Field Rad (beta/gam)	N/A	cpm	13,420 Na-I2
33-01746	0 to	0	PID	0	ppm	
33-01746	0 to	0	XRF	N/A	ppm	

PCB Screening just under 1.0 ppm

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 10

Roll # 3

Comments:

Soil: ~~Host rock~~ 5/22/96 All pink tuff. Moderate phenocrysts, smoky gray in color. Large pumice lenses, .5" to 1.5" diameter - brown unwelded pumice. Core is very non-compacted to powdery soft, weathered material. Very dry

Location: Same as 0333-96-0301

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0019

Date May 17, 1996 **Time** 1400 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1535 33-008.b

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** KMB 5/17/96 ~~Linda Fluk~~ Kristi Begoin

Composite Type: None **Signature** Kristi A Begoin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01535		12 to 0	18	0	in,	0	

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0083~~ KM 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0083~~ 1122-96-0099
03	TU	125 ml Polyethylene	None	~~1122-96-0083~~

Weather Same as 0333-96-0024

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01535	0 to	0	FID	NA	ppm	
33-01535	0 to	0	Field HE	NA		
33-01535	0 to	0	Field Rad (alpha)	NA	cpm	
33-01535	0 to	0	Field Rad (beta/gam)	250	cpm	14,060 NaI2
33-01535	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 23
Roll 2

Comments:

Soil: Consists almost entirely of decomposing timber. Minor sands and silts w/ abundant intermixed vitrified pumice fragments 1-3mm ~~diameter~~ KMB 5/17/96 diameter. Slightly moist. Very dark brown. Abundant wood pieces 1"-5" in length. Broken up from drilling.

Location is on SE section of landfill. Chamisa and grasses cover the area. Approx. 15 feet N. of asphalt road.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0020

Date May 17, 1996 **Time** 1420 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1535 33-0086

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ ICCB

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01535		2.5	3.5	0	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0084 RH 6/14/96
02	SEMI	125 ml Glass	Ice	1122-96-0084
03	TU	125 ml Polyethylene	None	1122-96-0084 1122-96-0099

Weather Same as 0333-96-0024

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01535	0 to	0	FID	NA	ppm	
33-01535	0 to	0	Field HE	NA		
33-01535	0 to	0	Field Rad (alpha)	NA	cpm	
33-01535	0 to	0	Field Rad (beta/gam)	180	cpm	14,320 Na I 2
33-01535	0 to	0	PID	NA	ppm	
33-01535	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #24
Roll 2

Comments:

Soil: All decomposed humus. All decomposed timbers. There are not any large pieces of timber ~ it is all broken up. There are 5 small pieces of foam intermixed within the sample. Moderate other organics (roots) Minor silts. Dark brown. Slightly moist.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0021

Date May 17, 1996 **Time** 1430 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0086

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01535		3.5 0	5.0 0	ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0088~~ KH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0085~~ 1122-96-0099
03	TU	125 ml Polyethylene	None	~~1122-96-0085~~

Weather Same as 0333-96-0024

Sample Description

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01535	0 to	0	FID	NA	ppm	
33-01535	0 to	0	Field HE	NA		
33-01535	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01535	0 to	0	Field Rad (beta/gam)	185	cpm	14,160
33-01535	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 24
Roll 2

Comments: All tuff. Highly compacted. Same as 0333-96-0025

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0022

Date May 17, 1996 **Time** **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008b

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01535		0	0		0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0086~~ KH 6/11/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0086~~
03	TU	125 ml Polyethylene	None	~~1122-96-0086~~ NA

Weather _____

Sample Description This sample was not collected

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01535	0 to	0	FID	NA	ppm	
33-01535	0 to	0	Field HE	NA		
33-01535	0 to	0	Field Rad (alpha)		cpm	
33-01535	0 to	0	Field Rad (beta/gam)		cpm	
33-01535	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0023

Date May 17, 1996 **Time** 1155 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0036

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KCB 5/17/96

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01536		1.5 to	2.5	ft.	0	0	

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0087~~ KH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0087~~
03	TU	125 ml Polyethylene	None	~~1122-96-0087~~ 1122-96-0099

Weather Same as 0333-96-0031

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01536	0 to	0	FID	NA	ppm	
33-01536	0 to	0	Field HE	NA		
33-01536	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01536	0 to	0	Field Rad (beta/gam)	180	cpm	14,380 NaI 2
33-01536	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 21

Comments: Soil was very loamy with dark, timber-rich organic layer at 2' to 2.5" feet. There are major pumice fragments and moderate tuff gravels and pebbles. Moderate to minor organic (other than rotting timber) consisting of roots. Dry. Medium Brown color.

Location is on Eastern and Northern side of landfill.

Much chamisa and grasses

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0024

Date May 17, 1996 **Time** 1320 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0086

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ 5/17/96 KAB

Composite Type: None **Signature** Kristi A Bryant

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01536	2.5	0	3.5	0	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0088
02	SEMI	125 ml Glass	Ice	1122-96-0088
03	TU	125 ml Polyethylene	None	1122-96-0088

KH 6/14/96

1122-96-0099

Weather Breezy - winds from SW 5-15 mph. Cool - 78°F, Few high cirrus clouds

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01536	0 to	0	FID	NA	ppm	
33-01536	0 to	0	Field HE	NA		
33-01536	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01536	0 to	0	Field Rad (beta/gam)	200	cpm	14,120 Na I 2
33-01536	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 22 of the core w/ 2 sample bottles

Roll 2

Comments:

Soil description: Tuff is right at 3.5 feet

This sample is being collected as the material just above the tuff.

Soil is mostly fine sands and silts. Moderate tuff gravels and pebbles. Abundant ~~tuff~~ KAB 5/17 pumice fragments (highly vitrified) Minor organics (roots) and some decomposing wood matter right at 2.5 feet. Dry, light brown material.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0025

Date May 17, 1996 **Time** 1335 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0086

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KAB 5/17/96

Composite Type: None **Signature** [illegible]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01536		3.5	0 to 4.5	0	~~5.8 ft.~~	0	KAB 5/17/96

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C.of C Control No.
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0089~~ KH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0089~~
03	TU	125 ml Polyethylene	None	~~1122-96-0089~~ 1122-96-0099

Weather Same as 0333-96-0024

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01536	0 to	0	FID	NA	ppm	
33-01536	0 to	0	Field HE	NA		
33-01536	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01536	0 to	0	Field Rad (beta/gam)	190	cpm	11,680 Dal2
33-01536	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 22, Of the Core
Roll 2

Comments:

Soil: All tuff. Highly compacted with unwelded pumice lenses. Moderate phenocrysts - 10%; large fractures with a deposit of some sort (not calciferous) that lines both sides of the fracture. It is a white calcium-looking deposit. Tuff is pink.

Dry.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0026

Date May 17, 1996 **Time** **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0036

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01536		0	0		0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0090~~ RH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0090~~
03	TU	125 ml Polyethylene	None	~~1122-96-0090~~

Weather Same as 0333-96-0024

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01536	0 to	0	FID	NA	ppm	
33-01536	0 to	0	Field HE	NA		
33-01536	0 to	0	Field Rad (alpha)	NA	cpm	
33-01536	0 to	0	Field Rad (beta/gam)		cpm	
33-01536	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #
Roll #

Comments:

Soil: This sample was not collected. We collected only 3 samples from this profile. Tuff was at 3.5 feet.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0027

Date May ~~17~~ 20, 1996 KMB 3/20/96 **Time** 0940 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0036

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01537		1.5	0 to 2.50	ft	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
01	METTAL	125 ml Polyethylene	Ice	1122-96-0091
02	SEMI	125 ml Glass	Ice	1122-96-0091
03	TU	125 ml Polyethylene	None	1122-96-0091

KF 5/20/96 -9013

Weather Same as for 0333-96-1000

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method		Result	Units	Comments
33-01537	0 to	0	FID	NA		ppm	
33-01537	0 to	0	Field HE	NA			
33-01537	0 to	0	Field Rad (alpha)	N/A		cpm	
33-01537	0 to	0	Field Rad (beta/gam)	17U		cpm	14,320
33-01537	0 to	0	PID	NA		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #3, Photos # 1, & 2

Comments: Soil: Same as for 0333-96-1000

Location in the NE Quadrant of Landfill

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-1000

Date May 20, 1996 **Time** 9:40 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1537

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi B Beguin

Grabs:

	Location ID	Stake ID	Start	Depth	End	Depth	Units	Vol	Units	Comments
1	33-01537		1.5	0	to	0	2.5	ft.	0	

These Samples were collected using LANL ER SOP 04.01

ID	Analysis	Container	Preservative	C of C Control
01	METTAL	125 ml Polyethylene	Ice	1122-96-9010
02	SEMI	125 ml Glass	Ice	1122-96-9010 -9013
03	TU	125 ml Polyethylene	None	1122-96-9010

Weather Clear, breezy - winds from W. 5-10mph. Sunny - 75°F.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01537	0 to	0	FID	N/A	ppm	
33-01537	0 to	0	Field HE	N/A		
33-01537	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01537	0 to	0	Field Rad (beta/gam)	170	cpm	14,320 Na 12
33-01537	0 to	0	PID	N/A	ppm	
33-01537	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #

Roll #3, Photos # 1 & 2

Comments:

Soil: Mostly decomposed timbers, minor sands and abunda interrived pumice fragments (highly vitrified, approx 1cm diameter Dark brown color. Very dry. Hit tuff at 3.5 feet depth (in next core barrel). The pocket of decomposed timbers went from 2.0 to 2.5 feet depth. Upper portion of split-spo was all fill material. Mixed sand & silts. Minor eng. fill gravels and tuff gravels.

Enter @ 1000

Location: In the NE Quadrant of Landfill

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0028

Date May ~~17~~ 20 1996 KCAB 5/20/96 **Time** 0950 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0086

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01537		0	2.5 to 0	3.5 ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0092
02	SEMI	125 ml Glass	Ice	1122-96-0092 -9013
03	TU	125 ml Polyethylene	None	1122-96-0092

Weather Same as 0333-96-1000

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01537	0 to	0	FID NA		ppm	
33-01537	0 to	0	Field HE NA			
33-01537	0 to	0	Field Rad (alpha) N/A		cpm	
33-01537	0 to	0	Field Rad (beta/gam) 156		cpm	15.300 Na I 2
33-01537	0 to	0	PID NA		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #3, Roll 3 Broom before the bowl

Comments:

Soil: Hit tuff at 3.5 feet. Pocket of rotted timbers went from 2.0 to 3.5 feet depth. Many pumice fragments in the timbers. Highly decomposed, Moderate sands and minor tuff pebbles. Medium brown color. Very dry.

Location: Same as 0333-96-1000

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0029

Date May ~~17~~ 20, 1996 KCB 5/20/96 **Time** 1005 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-00826

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ KCB 5/20/96

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01537		5.5	0 to 0	6.5 ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0093
02	SEMI	125 ml Glass	Ice	1122-96-0093 -9013
03	TU	125 ml Polyethylene	None	1122-96-0093

Weather Same as 0333-96-1000 KC 5/20/96

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01537	0 to 0	FID	NA	ppm	
33-01537	0 to 0	Field HE	NA		
33-01537	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01537	0 to 0	Field Rad (beta/gam)	15,000 NaI2	cpm	160 B/G
33-01537	0 to 0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #4, Roll #3, Broom on side of the bowl.

Comments: Soil: All Gray, weathered tuff. Many fractures present at 6.0 to 6.5 ft. depth. Calcium-looking precipatate at 6.5 ft. 1" length, powdery to mildly compacted, large pumice lenses in core. Dark gray to brown (non-welded) Very dry.

Total depth 6.5 feet.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0030

Date May ~~17~~ 20 KMB 5/20/96, 1996 Time

Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122

Sample Location 33-008b

QA/QC Type None

Composite: ○ Yes ◉ No

Name (Print) Linda Fluk

Composite Type: None

Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01537		0	0		0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0094~~ KH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0094~~
03	TU	125 ml Polyethylene	None	~~1122-96-0094~~ N/A

Weather

Sample Description This sample was not collected.

Field Screening

Loc ID	Depth		Screening Method		Result	Units	Comments
33-01537	0 to	0	FID	NA		ppm	
33-01537	0 to	0	Field HE	N/A			
33-01537	0 to	0	Field Rad (alpha)			cpm	
33-01537	0 to	0	Field Rad (beta/gam)			cpm	
33-01537	0 to	0	PID	NA		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments: This sample was not collected.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0031

Date May 17, 1996 **Time** 0930 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008b

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01538		0	to 1 ft. 0		0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0095~~ RH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0095~~
03	TU	125 ml Polyethylene	None	~~1122-96-0095~~ 1122-96-0099

Weather ~62°F, windy (from SE) mostly sunny, dry

Sample Description See below.

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01538	0 to	0	FID	NA	ppm	
33-01538	0 to	0	Field HE	NA		
33-01538	0 to	0	Field Rad (alpha)	NA	cpm	
33-01538	0 to	0	Field Rad (beta/gam)	150	cpm	14,460 NaI 2
33-01538	0 to	0	PID	~~NA~~ 5/17/96 bkg	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #2, #15. Picture #16 is of metal object in ground from which soil sampled adjacent to

Comments:

site descr. In landfill, topographically flat area, heavy vegetation of chamisa & grasses. Russian olive trees nearby. This location is approx. 10 ft from paved road.

descr. Sampled 0-1 ft. depth - Hit large metal object (which stopped drilling). Moved rig 5 ft. forward to continue drilling.

Fill material is mostly sandy with silts. Moderate tuff and Rounded fill gravels, Moderate tuff pebbles and minor eng. fill pebbles. Moderate organics (roots) Very dry. Light beige-brown.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0032

Date May 17, 1996 **Time** 1030 **Sample Type** ~~Soil-Surface~~ O-K 5/17/96 ~~33-0086~~ 5/17/96

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0086

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start	Depth	End	Depth	Units	Vol	Units	Comments
1	33-01538		8"	0	to	0	16"	0	depth	

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0096~~ KH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0096~~
03	TU	125 ml Polyethylene	None	~~1122-96-0096~~ 1122-96-0099

Weather ~62°F, windy (from SW) mostly sunny, dry

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01538	0 to	0	FID	NA	ppm	
33-01538	0 to	0	Field HE	NA		
33-01538	0 to	0	Field Rad (alpha)	NA	cpm	
33-01538	0 to	0	Field Rad (beta/gam)	250	cpm	14,500, NaI2
33-01538	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #2 Photo #18 with sample bottle next to core.

Comments:

Soil description: This hole was moved 5 feet South of original borehole location.

Sample consists of fine silts and medium to course sands. There are many cinders present is this sample. They are timber cinders. Some of the rocks are charred which might indicate they burned debris in place. Moderate organics (roots) Moderate tuff gravels and fill gravels and pebbles. Medium to light brown color. Very dry.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0033

Date May 17, 1996 **Time** 1040 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008b

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01538		3.0 to 0	4.0	0 ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0097~~ KH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0097~~
03	TU	125 ml Polyethylene	None	~~1122-96-0097~~ 1122-96-0099

Weather ~62°F, windy (from SE SW) mostly sunny, dry

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01538	0 to	0	FID	NA	ppm	
33-01538	0 to	0	Field HE	NA		
33-01538	0 to	0	Field Rad (alpha)	NA	cpm	
33-01538	0 to	0	Field Rad (beta/gam)	230	cpm	14,300 Na I 2
33-01538	0 to	0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #2, Photo #19. of the core (wrong sample bottle # in photo

Comments:

Tuff at 3.5 feet

Soil: In the core, the sample consisted of a large clay (weathered tuff) layer from 2.5 to 4.5 feet. The material is obviously tuff with a clay-like consistency. There are many pumice fragments ~~present~~ KCR 5/17/96 present throughout the material. Major tuff pebbles and pumice fragments. There also appears to be Mica present in the organic bands present in the sample. The organic bands were present at 2.5 ft. for 1", and at 3.0'. Soil varies in color from pink, to reddish to dark brown, with the white pumice. Slightly moist throughout the clay-like tuff layer.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0034

Date May 17, 1996 **Time** 1050 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0086

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01538		5.0 0	6.0 0	Ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
01	METTAL	125 ml Polyethylene	Ice	~~1122-96-0098~~ RH 6/14/96
02	SEMI	125 ml Glass	Ice	~~1122-96-0098~~
03	TU	125 ml Polyethylene	None	~~1122-96-0098~~ 1122-96-0099

Weather ~62°F, windy (from SE SW) mostly sunny, dry

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01538	0 to 0	FID	NA	ppm	
33-01538	0 to 0	Field HE	NA		
33-01538	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01538	0 to 0	Field Rad (beta/gam)	220	cpm	14,600 NaI 2
33-01538	0 to 0	PID	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #2, Photo #20

Comments:

Soil description: All tuff. Moderately compacted. Non-welded pumice present in the tuff. Very large phenocrysts 1-3mm diameter. Some is powdered from drilling. Pumice is very dark brown mauve color. Tuff is pink. Phenocryst are a smoky gray.

Tuff was at 3.5. Total depth was 7.5 ft.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0035

Date 5/16/96 **Time** 1310 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01539		0	1.5 to 0	2.5	0	ft.	

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0067
02	SEMI	125 ml Glass	Ice	1122-96-0067
03	TU	125 ml Polyethylene	None	1122-96-0067

Weather Sunny, Hot - 87°F. Winds from W. 5-10mph.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01539	0 to	0	FID	N/A	ppm	
33-01539	0 to	0	Field HE	N/A		
33-01539	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01539	0 to	0	Field Rad (beta/gam)	145	cpm	15,920 NaI2
33-01539	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 5,6 & 7 of the CORE.
Roll 2

Comments:

Soil: Mostly course to medium sands and fine silts. Minor engineering fill gravels & tuff gravels. Moderate Eng. fill pebbles. Whitish, light-brown color. Dry soil.

This borehole was in the NWestern corner of the landfill we hit no debris.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0036

Date 5/16/96 **Time** 1325 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth		End Depth	Units	Vol	Units	Comments
1	33-01539		2.5	0 to	0	3.5	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
01	METTAL	125 ml Polyethylene	Ice	1122-96-0067
02	SEMI	125 ml Glass	Ice	1122-96-0067
03	TU	125 ml Polyethylene	None	1122-96-0067

Weather Same as 0333-96-0035

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01539	0 to	0	FID	N/A	ppm	
33-01539	0 to	0	Field HE	N/A		
33-01539	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01539	0 to	0	Field Rad (beta/gam)	160	cpm	16,400, Na I 2
33-01539	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 8, Roll 2

Comments: Soil is mostly fill with course to medium sands and fine silts. Minor loam layer and minor clay layer. Minor organics (roots). Very dry. Light pinkish brown with some bands of dark brown (w/ loam & clay) some gray pumice intermixed within sample.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0037

Date 5/16/96 **Time** 1335 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01539		KAB 5/16/96 ~~4.0~~ 3.5	~~to 5.0~~ to 4.5	~~Ft.~~ ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0067
02	SEMI	125 ml Glass	Ice	1122-96-0067
03	TU	125 ml Polyethylene	None	1122-96-0067

Weather Same as 0333-96-0035

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01539	0 to	0	FID	N/A	ppm	
33-01539	0 to	0	Field HE	N/A		
33-01539	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01539	0 to	0	Field Rad (beta/gam)	180	cpm	
33-01539	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 9, Roll 2

Comments: This sample is the soil | tuff interface. Tuff was at 4.5 KAB 5/16/96 ~~5.0 feet~~.

Sample is mostly course to medium sands with major KAB 5/16/96 ~~interfi~~ intermixed silts and tuff gravels. Moderate pieces of pumice mixed throughout sample. Minor organics, roots. Light pinkish brown color. Very dry.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0038

Date 5/16/96 **Time** 1340 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01539		6.5 0	to 0	7.5 0		Ft.	

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0067
02	SEMI	125 ml Glass	Ice	1122-96-0067
03	TU	125 ml Polyethylene	None	1122-96-0067

Weather Same as 0333-96-0035

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01539	0 to	0	FID	N/A	ppm	
33-01539	0 to	0	Field HE	N/A		
33-01539	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01539	0 to	0	Field Rad (beta/gam)	155	cpm	15,900 Na I 2
33-01539	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 10, Roll 2

Comments: Soil: This sample was collected from 6.5 to 7.5 feet. Sample consists of all crushed Qbt tuff. Light pinkish color. Moderate phenocrysts - 20% Minor pumice lenses. Moderately compacted.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0039

Date 5/16/96 **Time** 1410 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01540		1.5 to	2.5 ft	0	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0067
02	SEMI	125 ml Glass	Ice	1122-96-0067
03	TU	125 ml Polyethylene	None	1122-96-0067

Weather Same as ~~0316~~ 0333-96-0035 KAB 5/16/96

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01540	0 to	0	FID	N/A	ppm	
33-01540	0 to	0	Field HE	N/A		
33-01540	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01540	0 to	0	Field Rad (beta/gam)	165	cpm	
33-01540	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 11 (sample) 12 (of core)
Roll 2

Comments:

Soil: Mostly course sands and fine silts

A layer of sand was approx. 5" long right at 2 feet. A layer of rotted, dark brown wood was located just below the sand layer. This wood pocket was approx. 4" long in the core. Pieces were all < 1 cm³

Moderate tuff gravels, minor engineering fill gravels, and pebbles. Light brown color. Dry

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0040

Date 5/16/96 **Time** 1420 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01540		2.5 to	3.5	ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0067
02	SEMI	125 ml Glass	Ice	1122-96-0067
03	TU	125 ml Polyethylene	None	1122-96-0067

Weather Same as 0333-96-0035

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01540	0 to	0	FID	N/A	ppm	
33-01540	0 to	0	Field HE	N/A		
33-01540	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01540	0 to	0	Field Rad (beta/gam)	320	cpm	BIG
33-01540	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 14, 13 (14 is of next core)
Roll 2

Comments:

Soil: Mostly coarse sands and medium to fine silts, Minor tuff gravels. There are layers of what looks like black cinders or ash. Some small pieces of asphalt are present. Minor engineering fill gravels light brown color. Minor organics (roots). Very dry.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0041

Date 5/16/96 **Time** 1435 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-0086

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01540		3.5	0 to 5.0	Ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-0067
02	SEMI	125 ml Glass	Ice	1122-96-0067
03	TU	125 ml Polyethylene	None	1122-96-0067

Weather Same as 0333-96-0035

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01540	0 to	0	FID	N/A	ppm	
33-01540	0 to	0	Field HE	N/A		
33-01540	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01540	0 to	0	Field Rad (beta/gam)		cpm	
33-01540	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo#: 13
Roll 2

Comments:

Soil: This sample was collected right above the tuff layer. There were some large pieces of black cinder-type rocks. Possibly could be cinders from the cinder cone. Approx. 2" diameter, Sub angular to angular. Solid black throughout. Moderate tuff gravels. Moderate sands and silts. Minor organics.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0068

Date May 23, 1996 **Time** 0940 **Sample Type** Tuff 33-002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** Sump TA-33-134. To 30 ft. TD

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		0	- 1 ft.	0	depth.	0	

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.	
01	H2O+H3	500 ml poly ~~ProtoCore~~ RH 6/14/96	Ice	1122-96-9016	1122-96-2052
02	ISOPU+TU	250 ml Polyethylene	None RH	1122-96-9016	1122-96-2052
03	METTAL	125 ml Polyethylene	Ice 6/14/96	1122-96-9016	1122-96-2052
04	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	Ice	1122-96-9017	1122-96-2053
05	SEMI	125 ml Glass	Ice	1122-96-9016	1122-96-2052
06	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-9016	1122-96-2052

Weather Clear, Warm - 85°F. Breeze from NW 0-8mph.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01328	0 to	0	PID	~~0~~ N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #
Roll #4

Comments: Soil: Mostly fill material. Engineering fill gravels, minor tuff gravels and pebbles (gray, weathered tuff) Minor organics roots and grasses. Moderately loamy texture. Medium brown color. Very dry.

Location: Drilling into sump. The sump cover (broken concrete) is on surface of the ground - appears to be sinking into sump. Much vegetation around this location - grasses Chamisa, juniper, piñon.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0069

Date May 23, 1996 **Time** 1010 **Sample Type** Tuff 33-002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** Sump TA-33-134. To 30 ft. TD

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		7.5 to 95	ft. depth		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.	
01	H2O+H3	500ml poly ~~ProtoCore~~	Ice	~~1122-96-9016~~	1122-96-2052
02	ISOPU+TU	250 ml Polyethylene	None	~~1122-96-9016~~	1122-96-2052
03	METTAL	125 ml Polyethylene	Ice	~~1122-96-9016~~	1122-96-2052
04	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	Ice	~~1122-96-9017~~	1122-96-2053
05	SEMI	125 ml Glass	Ice	~~1122-96-9016~~	1122-96-2052
06	VOAGCMS	125 ml Septum Amber gl	Ice	~~1122-96-9016~~	1122-96-2052

KH 6/14/96

Weather Same as 0333-96-0068

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	N/A	cpm	Tritium OnC/L
33-01328	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #2&3 Roll #4

Comments:

Soil: Mostly engineering fill sands and gravels. Two large pieces of vitrified clay pipe, broken from drilling. Hit tuff at 9 feet 3 inches - gray weathered tuff. At 9 feet 2 inches a layer of clay-like weathered tuff is sitting on the tuff interface. Soil is dry. light brown in color. There are moderate tuff gravels and pebbles.

?

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-1001

Date May 29, 1996 Time 1010 Sample Type Tuff 33-002(b)

Technical Area 33 Operable Unit 1122 Sample Location 33-002(b) 33-1328

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No Name (Print) Kristi Begun

Grabs: Signature Kristi Begun

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500ml poly ~~ProtecCore~~ KH 6/14/96	None	~~1122-96-0016~~ KH 6/14/96 1122-96-2052

Weather Same as 0333-96-0068

Sample Description Same as 0333-96-0069

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01328	0 to	0	PID	N/A	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 2 & 3
Roll 4

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0070

Date May 23, 1996 **Time** 1045 **Sample Type** Tuff 33-002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** Sump TA-33-134. To 30 ft. TD

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	10 to 15 feet	0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500ml poly ~~ProtecCore~~ KH 6/14/96	Ice KH	1122-96-9016 1122-96-2052
02	ISOPU+TU	250 ml Polyethylene	None 6/14/96	1122-96-9016 1122-96-2052
03	METTAL	125 ml Polyethylene	Ice	1122-96-9016 1122-96-2052
04	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	Ice	1122-96-9017 1122-96-2053
05	SEMI	125 ml Glass	Ice	1122-96-9016 1122-96-2052
06	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-9016 1122-96-2052

Weather Same as 0333-96-0068

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01328	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # ~~4~~ 5 & 6 Photo 4 is of drill Rig. (?)
Roll 4 KAB 5/29/96

Comments:

Soil: Collected material from a large fracture that runs from 10 feet to 15 feet. The fracture consists of a weathe beige tan material. Obvious mineralization along the fracture line ~ whitish to reddish color deposits along entire line. Minor roots present. The tuff is all gray weathered Unit 3 tuff - with abundant phenocrysts but almost no pumice

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0071

Date May 23, 1996 **Time** 1100 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	16'.0" to 16'.4"	0	0		0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.	
01	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	Ice KH 6/14/96	~~1122-96-9017~~	1122-96-2053
02	H2O+H3	500 ml poly ~~ProtecCore~~	Ice	~~1122-96-9016~~	1122-96-2052

Weather Same as 0333-96-0068

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01328	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 6 & 7
Roll 4

Comments:

Soil: All Gray, ~~weathered~~ KCAB 6/6/96 Unit 3 tuff. Abundant phenocrysts (smoky gray to reddish in color) Country rock inclusions (angular to subangular - dark colored, highly welded) and moderate pumice lenses - gray to purple - gray in color. Very dry. Moderately compact to highly compact.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0072

Date May 23, 1996 **Time** 1130 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	21.5 to 22.5	0	ft.		0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	Ice KH	~~1122-96-9017~~ 1122-96-2053
02	H2O+H3	500 ml poly ~~ProtecCore~~ KH 6/14/96	Ice 6/14/96	~~1122-96-9018~~ 1122-96-2052

Weather Same as 0333-96-0068

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01328	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 9
Roll #4

Comments:

Soil: All Unit 3 tuff. Sampled from 21.5 to 22.5 ft. Sampled along another lengthy fracture, with roots lining the fracture point. Sample description same as 0333-96-0071

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-~~1003~~ 0073 KGB 5/29/96

Date May 29, 1996 **Time** 1135 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(b)

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi G A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	26.3" to 27'.3"	0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis		Container	Preservative	C of C Control No.
01	H2O+H3	500ml poly	~~ProtecCore~~ KH 6/14/96	None KH 6/14/96 ~~1122-96-3016~~	1122-96-2052

Weather Same as 0333-96-0068

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01328	0 to	0	PID	N/A	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 11
Row 4

Comments: 26'.3" is the interface. Fracture runs to 25' to 26'.3" is Tshirege Unit 3, Hit Unit 2 at 26'3". Fracture runs from 26'.3" to 27'.3" Obvious interface zone - tuff changes from gray Tshirege to the pinkish tan tshirege tuff. Sample consists of Unit 2. Roots running along the vertical fracture zone. Pinkish brown w/ purplish reddish pumice lenses some white - pumice present. Minor inclusions of country rock.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-1002

Date May 29, 1996 **Time** 1045 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(b) 33-002(b) 33-1328

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	ProtecCore	None	~~1122-96-9010~~ 1122-96-2052 KH 9/17/96

Weather Same as 0333-96-0068

Sample Description Same as 0333-96-0070

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01328	0 to	0	PID	N/A	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0043

Date May 28, 1996 **Time** 1150 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) septic Tank

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01541		~~2' to~~ 2'4" 0	to 3.0	ft.	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	~~1122-96-2000~~ 1122-96-2050
02	ISOPU+TU	250 ml Polyethylene	None	1~~122-96-2000~~ 1122-96-2050
03	METTAL	125 ml Polyethylene	Ice	~~1122-96-2000~~ 1122-96-2050
04	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	None	1122-96-2051
05	SEMI	125 ml Glass	Ice	~~1122-96-2000~~ 1122-96-2050
06	VOAGCMS	125 ml Septum Amber gl	Ice	~~1122-96-2000~~ 1122-96-2050

Weather Sunny with a few clouds. Windy - from the South 5-15 mph, 75°F.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01541	0 to	0	FID	N/A	ppm	
33-01541	0 to	0	Field HE	N/A		
33-01541	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01541	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01541	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 12
Roll 3

Comments: Hit tuff at 2 feet 4" At 2 feet 8 inches hit a fracture zone 6" in length - consisted of red, weathered clay-like material, altered mineralization. Collected a sample from this clay-like fracture zone which was just below the soil / tuff interface. Interface was not obvious. Other surrounding material consisted of gray weathered tuff, moderately compacted, with moderate pumice fragments and phenocrysts - smoky gray in color.

All dry, light brown in color.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0044

Date May 28, 1996 **Time** 1220 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01541	8'3" to 8'8"	0	0	Ft.	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis		Container	Preservative	C of C Control	
01	H2O+H3	Protec CORE Bag. →	500 ml Polyethylene	None	RH 1122-96-2002	1122-96-2050
02	ISOPU+TU		250 ml Polyethylene	None	6/14/96 1122-96-2002	1122-96-2050
03	METTAL		125 ml Polyethylene	Ice	1122-96-2002	1122-96-2050
04	RVGROSSAB+RVGROSSG+RVH2O+RVH3		250 ml Polyethylene	None	1122-96-2003	1122-96-2051
05	SEMI		125 ml Glass	Ice	1122-96-2002	1122-96-2050
06	VOAGCMS		125 ml Septum Amber gl	Ice	~~1122-96-2002~~	1122-96-2050

Weather Same as 0333-96-0043

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01541	0 to	0	FID	N/A	ppm	
33-01541	0 to	0	Field HE	N/A		
33-01541	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01541	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01541	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 14 of the core
Roll 3

Comments: 8'3" to 8'8" Sample collected from a fracture-zone. All gray weathered tuff with moderate phenocrysts and pumice lenses. Pumice is gray on outside (similar to eggshell) and brown inside. Phenocrysts of quartz, all smoky gray color. Moderately compacted to highly compacted. Sample collected from natural fracture, slight mineralization alteration, minor roots present in fractured area. Very dry.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0045

Date May 28, 1996 **Time** 1245 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33.002(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start	Depth	End	Depth	Units	Vol	Units	Comments
1	33-01541	~~12'6"~~ 12'6" to	13'	0 2"		0	ft.	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control	
01	H2O+H3	500 ml Polyethylene	None	KH 1122-96-2004	1122-96-2050
02	ISOPU+TU	250 ml Polyethylene	None	6/14/96 1122-96-2004	1122-96-2050
03	METTAL	125 ml Polyethylene	Ice	1122-96-2004	1122-96-2050
04	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	None	1122-96-2005	1122-96-2051
05	SEMI	125 ml Glass	Ice	1122-96-2004	1122-96-2050
06	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2004	1122-96-2050

Weather Same as 0333-96-0043

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01541	0 to 0	FID	N/A	ppm	
33-01541	0 to 0	Field HE	N/A		
33-01541	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01541	0 to 0	Field Rad (beta/gam)	N/A	cpm	
33-01541	0 to 0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 15 & 16 of entire core.
Roll 3

Comments:

Soil: Collected from a large fracture of roots from 12' 6" to 13' 2". Fracture consisted of juniper roots and had altered mineralization (a slightly tan colored deposit). All other tuff is gray, weathered tuff, moderate phenocrysts, and brown pumice lenses. Moderately compacted to highly compacted, very dry. - All gray. Phenocrysts are smoky gray color.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0046

Date May 28, 1996 **Time** 1420 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01541	19'.0" to 19'.6"	0	ft.	0	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control	
01	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	None	~~1122-96-2007~~ N/A	1122-96-2051
02	H2O+H3	500 ml Polyethylene	None	~~1122-96-2006~~ 6/14/96	1122-96-2050

Weather Same as 0333-96-0043

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01541	0 to	0	FID	N/A	ppm	
33-01541	0 to	0	Field HE	N/A		
33-01541	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01541	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01541	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 24 & 25 of the entire 5 foot core

Comments: Still in the Qbt Unit 3, gray weathered tuff tuff same as 0333-96-0045. Large BROWN pumice fragments (unwelded) SOME up to 4" in length.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0047

Date May 28, 1996 **Time** 1445 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01541		24.0	to 25.0	Ft.	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	None	~~1122-96-2009~~ KH 6/14/96 1122-96-2051
02	H2O+H3	500 ml Polyethylene	None	~~1122-96-2008~~ 1122-96-2050

Weather Same as 0333-96-0043

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01541	0 to 0.	FID	N/A	ppm	
33-01541	0 to 0	Field HE	N/A		
33-01541	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01541	0 to 0	Field Rad (beta/gam)	N/A	cpm	
33-01541	0 to 0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 26 & 27 of entire 5 foot core
Roll 3

Comments:

Sample; 24.0 to 25.0 feet collected.
Sample is in Tshirege Unit 2, Hit Unit 2 Right at 24.0 feet. Pinkish-brown interval obviously different than the Unit 3 gray material, Minor feldspars present, Reddish quartz phenocrysts large chocolate-brown to purplish brown pumice lenses, present. This material is a much different color than gray material from Unit 3, but this material is a lighter buff color than the 25 to 30 foot interval.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0048

Date May 28, 1996 **Time** 1500 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth		End Depth		Units	Vol	Units	Comments
1	33-01542	26.0	to	0	26.5	0	feet	0		

RMB 6/13/96

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	None	~~1122-96-2010~~ 1122-96-2050
02	~~ISOPU+TU~~	~~250 ml Polyethylene~~	~~None~~	~~1122-96-2010~~
03	~~METTAL~~	~~125 ml Polyethylene~~	~~Ice~~	~~1122-96-2010~~
04	RVGROSSAB+RVGROSSG+RVH2O+RVH3	250 ml Polyethylene	None	~~1122-96-2011~~ 1122-96-2051
05	~~SEMI~~	~~125 ml Glass~~	~~Ice~~	~~1122-96-2010~~
06	~~VOAGCMS~~	~~125 ml Septum Amber gl~~	~~Ice~~	~~1122-96-2010~~

KH 6/14/96 KH 6/14/96 KCAB 5/28/96

Weather Same as 0333-96-0043

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID	N/A	ppm	
33-01542	0 to	0	Field HE	N/A		
33-01542	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01542	0 to	0	Field Rad (beta/gam)	N/A	cpm	
33-01542	0 to	0	PID	N/A	ppm	

RMB 6/13/96

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 28 & 29 of entire 5 foot core.
Roll 3

Comments:

Soil: Collected from an obvious fracture zone that contained roots. We are in obvious Tshirege Unit 2, pinkish tan tuff with large purple-brown and gray tuff fragments. Minor inclusions of country rock (very hard gray rocks) minor feldspars. There are several pieces of white pumice present.
All dry tuff.

?

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0074

Date May 30, 1996 **Time** 1549 **Sample Type** ~~Tuff~~ fill Materials

Technical Area 33 **Operable Unit** 1122 **Sample Location** 1542 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~

Composite Type: None **Signature** [illegible]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-~~01329~~	1542	4.0	5.0	FT.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	Ice	1122-96-2054
02	ISOPU+TU	500 ml Polyethylene	None	1122-96-2054
03	METTAL	500 ml Polyethylene	Ice	1122-96-2054
05	SEMI	125 ml Septum Amber G	Ice	1122-96-2054
06	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2054
07	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055

Weather Sunny, Hot - 79°F. Winds from S 5-15mph.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-0~~1329~~ 1542	0 to	0	FID	N/A	ppm	
33-0~~1329~~ LCS	0 to	0	Field HE	NA		
33-~~01329~~ 5/30/96	0 to	0	Field Rad (alpha)	N/A	cpm	
33-~~01329~~	0 to	0	Field Rad (beta/gam)	N/A	cpm	15,000 NaI2
33-~~01329~~	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 10
Roll #5

Comments: Sample collected from 4.0 to 5.0 feet. There is a very obvious line at four feet marking the fill layer and the sump gravels. Gravels are all angular dark gravels <.5" diameter. Material collected is dark to medium BROWN COLOR. Abundant gravels and pebbles, Minor sands, and Moderate silts. Clay pipe was broken at approx. 3.5 feet.

1

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0075

Date May 30, 1996 **Time** 0920 **Sample Type** ~~Tuff~~ Soil/tuff interface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33 002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~

Composite Type: None **Signature** Kristin A Bergman

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01329	1542 7.5ft.	0	8.5	ft.	0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	Ice	1122-96-2054
02	ISOPU+TU	500 ml Polyethylene	None	1122-96-2054
03	METTAL	500 ml Polyethylene	Ice	1122-96-2054
05	SEMI	125 ml Septum Amber G	Ice	1122-96-2054
06	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2054
07	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055

Weather Sunny, Warm - 70°F. Winds from the South 5-10mph.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01329	0 to	0	FID	N/A	ppm	
33-01329	0 to	0	Field HE	N/A		
33-01329	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01329	0 to	0	Field Rad (beta/gam)	190	cpm	NaI2 14,380
33-01329	0 to	0	PID	~~0~~ N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 11
Roll 5

Comments:

Sample description: The soil tuff interface was at 8feet 3inches. Fill material sitting on the tuff consisted of angular to subangular eng. fill cobbles, all dark in color. Moderate to abundant sands - darkened from weathering and the sump material. The tuff consisted of weathered, gray Tshirege Unit 3 tuff. Moderately compacted but broken from drillin. Abundant phenocrysts (Reddish to smoky gray in color) and Moderate brown pumice lenses.

?

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0076

Date May 30, 1996 **Time** 0940 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~

Composite Type: None **Signature** Kristin Meyerin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01329	1542	10 to 12.5	0	ft.	0	0	

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	Ice	1122-96-2054
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
03	ISOPU+TU	250 ml Polyethylene	None	1122-96-2054
04	METTAL	125 ml Polyethylene	Ice	" " 2054
05	SEMI	125 ml Glass	Ice	" " 2054
06	VOAGCMS	125 ml Septum Amber gl	Ice	" " 2054

Weather Same as 0333-96-0075

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01329	0 to 0	FID	N/A	ppm	
33-01329	0 to 0	Field HE	N/A		
33-01329	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01329	0 to 0	Field Rad (beta/gam)	155	cpm	14,300 Na/2
33-01329	0 to 0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 12
Roll 5

Comments: Sample: Material collected from 10 feet to 12.5 feet. Material may be slough from the upper interval, as there is darker soil present that looks like the fill material from the sump. Tuff is the same as 0333-96-0075, only more powdered.

The tritium sniffer detected tritium in the sample at a level over 20 nC/L.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0049

Date May 30, 1996 **Time** 1320 **Sample Type** Tuff 33-002(c)

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1542	19'.2"	0	19'.6"	0	Ft.	0	

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather Same as 0333-96-0075

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0	FID	N/A	ppm	
	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	150	cpm	15,450 NaI2
	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #13
Roll 5

Comments:

Sample: Soil is all powdered Tshirege Unit 3 tuff. Almost no compaction at all, all is very fine powder. Abundant quartz phenocrysts. Roots present throughout core, but no obvious fractures due to powdery texture.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0050

Date May 30, 1996 **Time** 1340 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1542	~~18' 8" to 19' 2"~~ 23' 8" to 24' 2"	0		Ft.	0		ICCAB 5/31/96

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather Same as 0333-96-0075

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0	FID	N/A	ppm	
	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	190	cpm	15,180 NaI2
	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):
Photo # 14 & 15 Wrong sample ID# on White board.
Roll 5.

Comments: ~~18' 8" to 19' 2"~~ ICCAB 5/31/96 23' 8" to 24' 2"
Soil: Sample consisted of the material at the Tshirege Unit 3 | Unit 2 interface. Abundant large quartz phenocrysts, Minor pumice fragments. Large inclusion (2-4" long 1" wide, highly welded - gray) Tuff is slightly tan in color, although not pinkish. Moderately compacted to slightly powdery

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0051

Date May 30, 1996 **Time** 1400 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1 33-1542	28.0	0	to 29.0	Ft,	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather Same as 0333-96-0075

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0.	FID	N/A	ppm	
	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	165	cpm	15400 Na/2
	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 16 & 17
Roll 5.

Comments: Soil consists of all Tshirege Unit 2 tuff collected ~~25' 4" to 27.5"~~ 28.0 to 29.0 feet. KCAB 5/31/96
Fracture runs for 1 foot and is coated with roots (large roots!) Abundant quartz phenocrysts, and large pumice fragments - purple to Red in color. White pumice present as well.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0052

Date May 30, 1996 **Time** 1415 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-1542	31'4" to 31'8"	0	0	Ft.	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0.	FID	N/A	ppm	
↓	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	155	cpm	14,840 Na/2
	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 18 & 19
Roll 5

Comments: 31'.4" to 31'.8"

Sample consists of all Tshirege Unit 2 tuff. Moderate Phenocrysts - Reddish to smoky color. Abundant large pumice - purple, Red, and pink color varieties White pumice lenses aswell. There are several fractures in the core, but no obvious alterations or Roots present. Pinkish-tan in color.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0053

Date May 30, 1996 **Time** 1500 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-1542		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2054
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055

Weather Same as 0333-96-0075

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0.	FID	N/A	ppm	
	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	190	cpm	15,270 Na/2
	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 20 & 21
Roll 5

Comments:

Sample: 36'.0 to 36'.4"
Sample consists of very friable pinkish tan tuff. Moderate inclusions of welded, angular rock <.5" diameter. Abundant phenocrysts. Soil is slightly damp. Pumice is abundant (Red, black purple, white, & brown in color. → Much less quartz than previous cores have been.

40 feet is TD so far.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0054

Date May 30, 1996 **Time** 0900 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-1542	4	0	to 40.60	ft.	0		Sample collected

These Samples were collected using LANL ER SOP 06.24 40 to 45 is the Run

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather LMB 6/3/96 ~~Same as 0333-96-0075~~ Cloudy to Ptly Cloudy, breeze from S.5-10 approx. 70°F. Humi

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0.	FID	N/A	ppm	
	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	N/A 150	cpm	14,300 Na I2
	0 to	0	PID	N/A	ppm	

18 mC/L on tritium sniffer from 40 to 42.5
8 mC/L from 42.5 to 45.0 ft

Photo (Roll, Frame, Azimuth, Subject, Participants):
Photo# LMB 6/3/96 ~~21~~ & 22 & 23 of entire core.
Roll # 5 Second photo shows incorrect Sample ID#.

Comments:
Soil: All Tshirege Unit 2 Tuff Pinkish tan in color slightly moist. Abundant pumice fragments up to 2" diameter (purple, red, brown, dark brown, and white in color) moderat to minor phenocrysts. Minor lithic fragments. Highly compact to Moderately compact.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0055

Date May 30, 1996 **Time** 0940 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-1542		~~42.~~ ~~45 to 0~~ ~~46.0~~ 47.5 to 48.5 ft.		ft.	0		45 to 50

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Contalner	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather Same as 0333-96-~~0075~~ 0054 KCAB 6/3/96

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0	FID	N/A	ppm	
	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	135	cpm	13,200 Na/2
	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# ~~23 & 24~~ 24 to 25 KCAB 6/3/96

Roll# 5

Comments:

Sample: Same as 0333-96-0054.

Soil slightly moist. Non-compact to friable

From ~~45 to 46~~ 47.5 to 48.5 ft. Hard, moderately to highly

KCAB 6/3/96

Compacted from ~~46 to 50~~ 48.5 to 50 feet.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0056

Date May 30, 1996 **Time** 0950 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-1542	51'.8"	0	52'.6"	0	0		

50 to 55

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather Same as 0333-96-~~0075~~ 0054 KCAB 6/3/96

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0	FID	N/A	ppm	
	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	130	cpm	5,000 NaI2
	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# ~~25~~ 26 And 27 KCAB 6/3/96

Roll # 5

Comments:

Sample: Core is highly compact from 50' to 51'.8". Moderately compact to friable from 51'.8" to ~~52'.5"~~ 52'.6" KCAB 6/3/96

Collected the soft friable material.

Slightly moist soil, Same as 0333-96-0054,

(52'.9" to 10"), (53'.2" to 4" Rootlets), (~~53'.6~~ 53'.7" to 53.8" KCAB 6/3/96), (54'.4" to 54'.6")

fracture intervals.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0057

Date May 30, 1996 **Time** 1030 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-1542		57.5 to	58.5	0	-ft.	0	55 to 60

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather Same as 0333-96-0054

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-1542	0 to	0.	FID	N/A	ppm	
	0 to	0	Field HE	N/A		
	0 to	0	Field Rad (alpha)	N/A	cpm	
	0 to	0	Field Rad (beta/gam)	135	cpm	13,800 Na/g
	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 28 & 29

Roll #

Comments:

Sample: Highly compacted tuff - seems to be entering a much harder region of tuff. Abundant pumice - 20%. Still in a variety of colors: Red, greenish brown, gray-purple, white, and brown. Minor basaltic cinders appearing in core. Core color has changed to a more reddish-dark tan slightly moist. Moderate phenocrysts - some sanadine still present.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0058

Date May 30, 1996 **Time** 1040 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542	61'.4"	0	to 0	62.2"	0		

60 to 65

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather Same as 0333-96-0054

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID	N/A	ppm	
33-01542	0 to	0	Field HE	N/A		
33-01542	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01542	0 to	0	Field Rad (beta/gam)	140	cpm	13,300 Na.I2
33-01542	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 30 and 31

Roll # 5

Comments:

Sample: Collected from 61'.4" to 62'.2" along a fracture line. Vertically oriented fractures.

60'.8" - fracture
61'.4" 62'.2" - fracture

Sample is the same as 0333-96-~~0058~~ 0057 KCB 5/30/96 only slightly more reddish in color. Slightly moist.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0059

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

65 to 70

No Sample Taken

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	KH 6/14/96 1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	~~1122-96-2054~~

Weather Same as 0333-96-0054

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0.	FID	N/A	ppm	
33-01542	0 to	0	Field HE	N/A		
33-01542	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01542	0 to	0	Field Rad (beta/gam)		cpm	
33-01542	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #

Roll #

Comments:

Sample:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0060

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

These Samples were collected using LANL ER SOP 06.24 70 to 75

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	~~1122-96-2055~~
02	H2O+H3	500 ml Polyethylene	None	~~1122-96-2054~~

TT# 6/14/96

Weather Same as 0333-96-0054

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID	N/A	ppm	
33-01542	0 to	0	Field HE	N/A		
33-01542	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01542	0 to	0	Field Rad (beta/gam)		cpm	
33-01542	0 to	0	PID	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #

Roll #

Comments:

Sample:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0061

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

These Samples were collected using LANL ER SOP 06.24 75 to 80

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	~~1122-96-2054~~
02	RVH20+RVH3	125 ml Polyethylene	None	6/14/96 ~~1122-96-2055~~

Weather Same as 0333-96-0054

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0.	FID	N/A	ppm	
33-01542	0 to	0	Field HE	N/A		
33-01542	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01542	0 to	0	Field Rad (beta/gam)	(N/A)	cpm	
33-01542	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #
Roll #

Comments:

Sample:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0062

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

These Samples were collected using LANL ER SOP 06.24 80 to 85

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

KH 6/14/96

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID		ppm	
33-01542	0 to	0	Field HE			
33-01542	0 to	0	Field Rad (alpha)		cpm	
33-01542	0 to	0	Field Rad (beta/gam)		cpm	
33-01542	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0063

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

These Samples were collected using LANL ER SOP 06.24 85 to 90

ID	Analysis	Container	Preservative	C.of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None KH 6/14/96	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID		ppm	
33-01542	0 to	0	Field HE			
33-01542	0 to	0	Field Rad (alpha)		cpm	
33-01542	0 to	0	Field Rad (beta/gam)		cpm	
33-01542	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0064

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

These Samples were collected using LANL ER SOP 06.24 90 to 95

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

KH 6/14/96

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID		ppm	
33-01542	0 to	0	Field HE			
33-01542	0 to	0	Field Rad (alpha)		cpm	
33-01542	0 to	0	Field Rad (beta/gam)		cpm	
33-01542	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0065

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

These Samples were collected using LANL ER SOP 06.24 95 to 100

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None KH	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None 6/14/96	1122-96-2054

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID		ppm	
33-01542	0 to	0	Field HE			
33-01542	0 to	0	Field Rad (alpha)		cpm	
33-01542	0 to	0	Field Rad (beta/gam)		cpm	
33-01542	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0066

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	~~1122-96-2055~~
02	H2O+H3	500 ml Polyethylene	None	~~1122-96-2054~~

RH 6/14/96

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID		ppm	
33-01542	0 to	0	Field HE			
33-01542	0 to	0	Field Rad (alpha)		cpm	
33-01542	0 to	0	Field Rad (beta/gam)		cpm	
33-01542	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0067

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(c)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01542		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055
02	H2O+H3	500 ml Polyethylene	None	1122-96-2054

1/14 6/14/96

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01542	0 to	0	FID		ppm	
33-01542	0 to	0	Field HE			
33-01542	0 to	0	Field Rad (alpha)		cpm	
33-01542	0 to	0	Field Rad (beta/gam)		cpm	
33-01542	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0077

Date May 30, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01329		0	0		0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control
02	H2O+H3	500 ml Polyethylene	Ice KH 6/14/96	1122-96-2054
03	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2055

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01329	0 to	0	FID		ppm	
33-01329	0 to	0	Field HE			
33-01329	0 to	0	Field Rad (alpha)		cpm	
33-01329	0 to	0	Field Rad (beta/gam)		cpm	
33-01329	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-1003

Date 00/00/00 **Time** 0950 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type ~~None~~ Duplicate 33-002(b)

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs: 30' to 31'3"

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	~~35'~~	~~to~~	~~36'8"~~				

These Samples were collected using LANL ER SOP 06.24 ~~35 to 40~~ 30 to 35

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2059
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	~~210~~ 175	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# ~~34 & 35~~ 32 & 33

Roll # 5

Comments: Same as 0333-96-0500

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0500

Date June 4, 1996 **Time** 0950 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	30' to	0	31.3"	0	FT.	0	30 to 35

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	None	1122-96-2059
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Clear, Warm. Slight breeze fr. S. 0-5mph. 75°F.

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	175	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 32 & 33 of the entire 5 foot Run.
Roll# 5

Comments:

Sample: Friable to mildly compact Unit 2 Tshirege tuff Pinkish tan color, slightly moist. Several natural fractures with rootlets present. Minor to moderate pumice fragments <.5" diameter to 1" diameter (Red, purple-gray, white, brown colors) Moderate quartz phenocrysts

Location: South sump, directly in center of sump. Chamisa, juniper grama grasses present. ~30 ft East of bldg. 86 fence line.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0501

Date June 4, 1996 **Time** 1010 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** 33-002(b) Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		36'.0" to 36.8"	0		0		

These Samples were collected using LANL ER SOP 06.24 ~~40 to 45~~ 35 to 40

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	None	1122-96-2059
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	210	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

An H_3 Reading of 50 nCi/L down the hole.

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 34 & 35

Roll # 5

Comments:

Sample: Same as 0333-96-0500. Sample biased to rootlets present in the core. Sample was slightly moist. Tuff was friable to moderately compact.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0502

Date June 4, 1996 **Time** 1050 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** 33-002(ro) Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		40'0" + 0	41'0" 0	Ft.	0		

~~45-50~~ 40 to 45

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	None	1122-96-2059
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0.	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	145	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Tritium Reading of 50nCi/L down hole

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo#: 36 - of samplers doing work 37 & 38

Roll#: 5

Comments:

Sample: Same as 0333-96-0500.
Soil is still friable, non-compacted tuff.
Mostly unconsolidated, semi moist. No obvious
Rootlets or fractures. Moderate pumice fragments
(Reddish, brownish, and white in color) minor
inclusions of highly welded, angular rock - dark
gray to black color.
Pinkish-tan

Took a duplicate: 0333-96-1004

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-1004

Date May 29, 1996 **Time** 1050 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(b) 33-1328

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500ml poly ~~ProteoCore~~ KAB 125ml poly	None	~~1122-96-0016~~ 1122-96-2059 1122-96-2060

Weather Same as 0333-96-0500

Sample Description Same as 0333-96-0502

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	145	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 37 & 38
Roll 5

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0503

Date June 4, 1996 **Time** 1430 * **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	43' to 45' ft	0			0		

~~50 to 55~~ 45 to 50

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	None	~~1122-96-2059~~ 1122-96-2061
02	RVH20+RVH3	125 ml Polyethylene	None	~~1122-96-2060~~

KH 6/17/96

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0.	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	165	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 1 (* Need to check photo for correct time.)

Roll # 6

Comments:

Sample: Same as 0333-96-0500 still the soft, friable tuff with intermixed tuff gravels. Slightly Moist. Rootlets present, which is why we chose this interval rather than the next interval.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0504

Date June ~~4~~ 5, 1996 Time 0905 Sample Type Tuff

Technical Area 33 Operable Unit 1122 Sample Location 33-1328/ SUMP TA-33-134 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	48'10"	to	50 ft.	0	0		

These Samples were collected using LANL ER SOP 06.24 ~~55 to 60~~ 50 to 55

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2059
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	160	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 2 & 3 of both 25 foot Core Runs
Roll# 6

Comments:

Sample: Sample collected from 48' 10" to 50 feet depth. Sample collected from material lining a vertical fracture that ran along the same depth interval. Rootlets lined the fracture. The soil was semi-moist. Still in Tshirege Unit 2 tuff. The tuff was moderately compact, with several 2"-4" intervals of friable tuff. Material contains moderate pumice (red, gray, white, and purple-brown in colors) minor to moderate phenocrysts.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0505

Date June 5, 1996 **Time** 0920 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	51' 6" to	0	52' 2"	0	0		

These Samples were collected using LANL ER SOP 06.24 ~~60 to 65~~ 55 to 60

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	None	1122-96-2059
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	165	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 4 & 5
Roll# 6

Comments:

Sample: Collected sample along fractured area w/ many rootlets, from 51' 6" to 52' 2".
Tuff is moderately compact - Not the same friable tuff we've been seeing. There is alteration present in the tuff bounding the rootlets - a slight yellowation of the pinkish - tan tuff. Abundant rootlets. Moderate phenocrysts - sanadine and quartz. Moderate pumice - (grayish reddish and purple - brown - very non-welded - friable pumice. Slightly moist.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0506

Date June ~~4~~ 5, 1996 **Time** 1000 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	595to	0	60		0		

~~65 to 70~~ 60 to 65

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	None	~~1122-96-2059~~ 1122-96-2061
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	150	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 6 & 7

Roll # 6

Comments:

Sample: Sample consisted of all moderately compact to compact tuff. Moderate pumice present - red, purple-gray, white in color. Minor phenocrysts. Some inclusions of very hard rock - not cinder. Slightly moist. There we no fractures or friable tuff from the 57.5 to 60 foot interval - All compact pinkish - tan.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0507

Date June ~~4~~ 5, 1996 **Time** 1010 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Begun

Composite Type: None **Signature** Kristi A Begun

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	61'.6"	to 0	62'.0	0 ft.	0		

These Samples were collected using LANL ER SOP 06.24 65 to 70 ~~to 75~~

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2059
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	162	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 8 & 9

Roll # 6

Comments:

KAB 6/5/96

Sample: From 60 to 62.5 ~~to~~ once again hit the softer, more friable tuff. There are some harder tuff gravels present in the soft tuff. Slightly moist. Pinkish tan. No rootlets present. No fractures. Minor phenocrysts present.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0508

Date June ~~4~~ 5, 1996 **Time** 1105 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134 33-00206)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	65' to 65.6"	0	0	ft.	0		

70 to 75 ~~to 80~~

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2059
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2060

Weather Same as 0333-96-0500

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	N/A	ppm	
33-01328	0 to	0	Field HE	N/A		
33-01328	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	155	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	N/A	ppm	

20 mC/L down hole H_3

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 10 & 11

Roll # 6

Comments:

Sample: Sample collected from 65.0 ft. to 65 ft. 6 in. from a 6 inch layer of softer, less compact tuff. The tuff in the core was otherwise highly compacted. Material collected was slightly moist. Abundant sanadine phenocrysts, minor pumice present - orangish-red to reddish in color. Pumice is becoming more flattened. Dark brownish reddish tuff

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0509

Date June 5, 1996 **Time** 1525 **Sample Type** Tuff 33-002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenny Hansel ~~Kristi Boguin~~

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		71'8" to	72'2"	0	0		

These Samples were collected using LANL ER SOP 06.24 ~~95 to 100~~ 70 to 75

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2063
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	Resealable Poly Bag	None	1122-96-2064

Weather Cloudy, wind at 8-10 mph, 85°F

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	250	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, Photo 12 & 13

Comments: Sample collected from Soil: 71 ft 8 in. – 72 ft 2 in.

Unit 2 Tshirege tuff, semi compact, abundant phenocrysts of sanidine, reddish tan, minor to mod. pumice (reddish purple). Semi moist.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0510

Date June 5, 1996 **Time** 1535 **Sample Type** Tuff 33-002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenny Hansel ~~Kristi Beggin~~

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	79 to 80	0	74	0	0		

These Samples were collected using LANL ER SOP 06.24 ~~75 to 75~~ 75 to 80

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	~~1122-96-2063~~
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	~~Resealable Poly Bag~~ 125 ml poly	None	1122-96-2064

Weather Cloudy, See 0333-96-0509

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	26D	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, photo 14 + 15

Comments:

Sample collected from 79 ft to 80 ft.

Soil same as 0333-96-0509

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0511

Date June 5, 1996 **Time** 1545 **Sample Type** Tuff 33-002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenny Harnes ~~Kristi Beguin~~

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328	83 to 84	0	74.	0	0		

~~75 to~~ 80 to 85

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	~~1122-96-2063~~
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	KH 6/17/96 ~~Resealable Poly Bag~~ KH 125 ml poly	None KH 6/17/96	1122-96-2064

Weather Same as ~~0333~~ 0333-96-0509

Sample Description ~~Same as 0333-96-0509~~ KH see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	255	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, Photo 16 + ~~16~~ 17 KH

Comments:

Sample collected from 83 ft to 84 ft at the interface between Unit 1 V and unit 2

Soil same as 0333-96-0511 except that the pumice becomes large (>2 in. diameter).

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0512

Date June 5, 1996 **Time** 1610 **Sample Type** Tuff 33-002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Name (Print) Kenny Hansel ~~Kristi Beguin~~

Signature [signature]

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		87.5 to	88.5	0 Ft.	0		

These Samples were collected using LANL ER SOP 06.24 ~~80 to~~ 85 to 90

ID	Analysis	Contalner	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2063
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	KH 6/17/96 ~~Resealable Poly Bag~~ 125 ml poly	None	1122-96-2064

Weather Same as 0333-96-0509

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	265	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, Photo 18 & 19

Comments:

Sample collected from 87.5 to 88.5 ft

Soil: Unit 1 V, minorly compact, pumice 1 in diameter unwelded (gray-purple-red), gray, semi mois minor sanadem + quartz

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0513

Date June 5, 1996 **Time** 1630 **Sample Type** Tuff 33-002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenny Hansel ~~Kristi Boguin~~

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		92.5	to 93.5	0	0		

These Samples were collected using LANL ER SOP 06.24 ~~85 to~~ 90 to 95

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	KH 6/17/96 ~~1122-96-2063~~
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	KH 6/17/96 ~~Resealable Poly Bag~~ 125ml poly	None	1122-96-2064

Weather Same as 0333-96-0509

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	270	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, Photo 20 + 21

Comments:

Sample collected from 92.5 to 93.5

Soil: Same as 0333-96-0512

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0514

Date June 6, 1996 **Time** 0925 **Sample Type** Tuff 33.002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Lenny Hansal ~~Kristi Boguin~~

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		90	100		0	ft	

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control
01	H2O+H3	500 ml Polyethylene	None KK 6/17/96	~~1122-96-2063~~
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	125 ml Polyethylene	None	1122-96-2064

Weather Sunny, Clear, Wind 0-3 mph

Sample Description see comments

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	146	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, Photo 22 + 23

Comments:

Sample collected from 96 ft to 97 ft.

Soil: Unit 1 V, noncompact, purple 12% pumice 1" diameter, gray, semi-moist. ≥ 2% phenocrysts

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0515

Date June 6, 1996 **Time** 0945 **Sample Type** Tuff 33-002(h)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenny Hansel ~~Kristi Beguia~~

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		C 0	KH 0		0		100-105 ft

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2063
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	125 ml Polyethylene	None	1122-96-2064

Weather Same as 0333-96-0514

Sample Description See comments

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	260	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants): KH

Roll 6, Photo ~~24 + 25~~ 26

Comments:

Sample collected from 102.5 ft to 103.5 ft.

Soil: Same as 0333-96-0514 except large pumice up to 4" diameter

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0516

Date June 6, 1996 **Time** 1600 **Sample Type** Tuff 33.002(b)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Kristi Beguin~~ Kenny Hansel

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		~~0~~ ~~NA~~	~~0~~		0		105 - 110 ft

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2063
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	125 ml Polyethylene	None	1122-96-2064

Weather Same as 0333-96-0514

Sample Description See comments

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	220	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, Photo ~~26 + 27~~ KH 24 + 25

Comments:

Sample collected from 109 ft to 110 ft.

Soil: same as 0333-96-0514 except large pumice (4" diameter)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0517

Date June 6, 1996 **Time** 1015 **Sample Type** Tuff 33-00246)

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenny Hancel ~~Kristi Beguin~~

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		~~0~~	~~KFT~~ ~~0~~		0		110 - 115 ft

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2063
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	125 ml Polyethylene	None	1122-96-2064

Weather Same as 0333-96-0514

Sample Description See comments

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	227	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, Photo 27 + 28

Comments:

Sample collected from 114 ft to 115 ft

Soil: Same as ~~0333-96-0514~~ 0333-96-0516

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0518

Date June 6, 1996 **Time** 1030 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1328/ SUMP TA-33-134 33-002(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Kristi Beguin~~ Kenny Hansen

Composite Type: None **Signature**

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01328		0	0		0	115 - 120	ft

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2063
02	RVGROSSAB+RVGROSSG+RVH2O+RVH3	125 ml Polyethylene	None	1122-96-2064

Weather Same as 0333-96-0514

Sample Description See Comments

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01328	0 to	0	FID	NA	ppm	
33-01328	0 to	0	Field HE	NA		
33-01328	0 to	0	Field Rad (alpha)	NA	cpm	
33-01328	0 to	0	Field Rad (beta/gam)	255	cpm	
33-01328	0 to	0	PID	0	ppm	
33-01328	0 to	0	XRF	NA	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 6, Photo 29 + 30

Comments:

Sample collected from 116.5 ft to 117.5 ft

Soil: Same as 0333-96-0517

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0519

Date June 10, 1996 **Time** 1500 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 2 feet south of sump 33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1		0	8	IN ~~12 in~~ KAB 6/10/96	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOPU	125 ml Polyethylene	None	1122-96-2065

Weather Many thunderheads above, Winds from the SW 0-8 mph. Hot 98°F.

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 12 in	FID	N/A	ppm	
	0 to 12 in	Field HE	N/A		
	0 to 12 in	Field Rad (alpha)	N/A	cpm	
	0 to 12 in	Field Rad (beta/gam)	322	cpm	
	0 to 12 in	PID	KAB 6/10/96 ~~N/A~~ N/A	ppm	
	0 to 12 in	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #2
Roll 7

Comments:

Sample collected 2 feet South of Hand auger location 33-1329. Tuff is at 6 inches depth in this soil. Tuff is very soft, friable gray Tshirege Unit 3 tuff. Abundant qtz. in tuff powder. Minor Roots present. Very dry.

Location: Abundant Chamisa, grasses, Piñon, and juniper in the surrounding area.

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0520

Date June 10, 1996 **Time** 1510 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 2 feet south of sump 33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	8" to 16"	0	depth ~~12 in~~ KAB 6/10/96		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOPU	125 ml Polyethylene	None	1122-96-2065

Weather Same as 0333-96-0519

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 12 in	FID	N/A	ppm	
	0 to 12 in	Field HE	N/A		
	0 to 12 in	Field Rad (alpha)	N/A	cpm	
	0 to 12 in	Field Rad (beta/gam)	315	cpm	
	0 to 12 in	PID	N/A	ppm	
	0 to 12 in	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 3
Roll 7

Comments: Sample collected from 8 to 16 inches in soil. All fine, powdered tuff (same as 0333-96-0519.)

Location: Same as 0333-96-0519

16" - 20" depth ~~10"~~ KAB 6/10/96

Also collected 0333-96-0527~~54~~ from this hole, from ~~30"~~ depth KAB 6/10/96

KAB 6/10/96

at 1520

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0521

Date June 10, 1996 **Time** 1500 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 2 feet West of sump 33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	0-8"	0	~~12~~ KMB 6/10/96	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOPU	125 ml Polyethylene	None	1122-96-2065

Weather Sarcas 0333-96-0519

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 12 in	FID	N/A	ppm	
	0 to 12 in	Field HE	N/A		
	0 to 12 in	Field Rad (alpha)	N/A	cpm	
	0 to 12 in	Field Rad (beta/gam)	355	cpm	
	0 to 12 in	PID	N/A	ppm	
	0 to 12 in	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 4
Roll 7

Comments:

Sampled from 0-8" depth. Soil is very silty, loose, soft, friable & dry. Minor roots. Minor tuff gravels. Light beige-brown.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0522

Date June 10, 1996 **Time** 1510 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 2 ft. West of sump 33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	12" to 24"	0	0	~~ft~~ IN,	0		soil/tuff interface

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOPU	125 ml Polyethylene	None	1122-96-2065

Weather Same as 0333-96-0519

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0 ft	FID	N/A	ppm	
	0 to 0 ft	Field HE	N/A		
	0 to 0 ft	Field Rad (alpha)	N/A	cpm	
	0 to 0 ft	Field Rad (beta/gam)	N/A	cpm	
	0 to 0 ft	PID	310	ppm	
	0 to 0 ft	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 5

Comments:

All tuff. Soft, friable, gray tuff. Abundant qtz. phenocrysts. At 2 ft. depth hit a dark reddish brown layer of clay-like weathered tuff. Also cinders were found at this depth.

Also collected 0333-96-0523 - From 2.5 feet depth. At 1515

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0523

Date June 10, 1996 **Time** 1520 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 2 ft. West of sump 33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1		0	0	ft	0		soil/tuff interface

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOPU	125 ml Polyethylene	None	1122-96-2065

Weather Same as 0333-96-0519

Sample Description Same as 0333-96-0522

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0 ft	FID	N/A	ppm	
	0 to 0 ft	Field HE	N/A		
	0 to 0 ft	Field Rad (alpha)	N/A	cpm	
	0 to 0 ft	Field Rad (beta/gam)	315	cpm	
	0 to 0 ft	PID	N/A	ppm	
	0 to 0 ft	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photos 4 & 5 of the hole

Comments:

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0524

Date June 10, 1996 **Time** 1515 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 2 feet south of sump 33-134

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	16" to 20"	0	~~12~~ 20	in	0		

KAB 6/11/96

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOPU	125 ml Polyethylene	None	1T22-96-2065

Weather Same as 0333-96-0519

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 12 in	FID	N/A	ppm	
	0 to 12 in	Field HE	N/A		
	0 to 12 in	Field Rad (alpha)	N/A	cpm	
	0 to 12 in	Field Rad (beta/gam)	322	cpm	
	0 to 12 in	PID	N/A	ppm	
	0 to 12 in	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photos 2 & 3 of the hole

Comments: Sample description: Same as 0333-96-0519

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0525

Date June 17, 1996 **Time** 1020 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 0 to 5 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		1 ~~0~~	~~0~~ 1.5		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	ISOPU+TU	250 ml Polyethylene	None	1122-96-2066
03	METTAL	125 ml Polyethylene	Ice	1122-96-2066
04	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067
05	SEMI	125 ml Glass	Ice	1122-96-2066
06	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2066

Weather Mostly Sunny - Warm - 75°F, Calm, No breeze.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	Background	cpm	
33-01652	0 to	0	PID	Ø	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 24 + 25 (2.5 - 5.0) 27 + 28 are of 5' - 10'.
Roll 7

Comments: Sample description: Sampled at soil/Tuff interface. Dry, minor root material, soil from 0-1' lt. brown soil with abundant grey tuff gravel, Tuff is grey with pumice and lithic quartz and country rock

cation description: ~120 ft. East of Borehole 33-1328, in the MDA-K drainfield. This borehole was placed at the intersection between the geophysical anomaly and a straight line connecting the hot sump w/ the hot borehole.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0526

Date June 17, 1996 **Time** 1040 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 5 to 10 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		3'1" ~~0~~	~~5'7"~~ ~~0~~ 4'1"		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	ISOPU+TU	250 ml Polyethylene	None	1122-96-2066
03	METTAL	125 ml Polyethylene	Ice	1122-96-2066
04	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067
05	SEMI	125 ml Glass	Ice	1122-96-2066
06	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2066

Weather See 0333-96-0525

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	background	cpm	
33-01652	0 to	0	PID	Ø	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 26

Roll 7

Comments: Sample description: Fractures in highly altered tuff. Tuff is grey to ~~dark~~ medium brown clay. Sample interval is moist. Semi-compacted to soft and friable. ~~High~~ Moderate root content.

Location: See 0333-96-0525

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0527

Date June 17, 1996 **Time** 1100 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 10 to 15 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		12'6" ~~0~~	~~0~~ 12'11"		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	ISOPU+TU	250 ml Polyethylene	None	1122-96-2066
03	METTAL	125 ml Polyethylene	Ice	1122-96-2066
04	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067
05	SEMI	125 ml Glass	Ice	1122-96-2066
06	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2066

Weather see 0333-96-0525

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	Background	cpm	
33-01652	0 to	0	PID	~~0~~	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 29 + 30 cover 10' – 15'

Roll 7

Comments: Sample description: Semi-compacted grey, unwelded tuff. Grey tuff with lithic quartz, country rock fragments, + pumice. Sampled at a slightly altered fracture, sample is slightly moist

Location: see 0333-96-0525

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0528

Date June 17, 1996 **Time** 1120 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 15 to 20 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		15' 10" 8	16' 4" 8		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather See 0333-96-0535

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	Background	cpm	
33-01652	0 to	0	PID	Ø	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):
Photo # 31 + 32 cover 15'-20'. white board is incorrectly labeled.
Roll 7

Comments: Sample description: Grey tuff with lithic quartz. Sampled at a fracture with minor root lets. Slightly moist.

Location: See 0333-96-0525

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0529

Date June 17, 1996 **Time** 1140 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 20 to 25 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Begum

Composite Type: None **Signature** Kristi Begum

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	23'4"	~~21'2"~~ 0	24'0"	0	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather See 0333-96-0525

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	background	cpm	
33-01652	0 to	0	PID	N/A	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):
Photo # 33 + 34 is interval 20 - 25'
Roll 7

Comments: Sample description: Tan tuff, unwelded. Contains lithic quartz, pumice, + country rock fragments. Sample interval was highly fractured - tuff was crumbly, slightly moist.

Location: see 0333-96-0525

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0530

Date June 17, 1996 **Time** 1410 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 25 to 30 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		29 to	30ft.	0	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather See 0333-96-0525

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0.	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgr.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 35 & 36
Roll # 7.

Comments: Sample description: Semi friable to semi compact tuff. Some flattened pumice present (Reddish, grayish, white and brown in color) Moderate phenocrysts semi-Moist. Minor inclusions of country rock. (Very welded, black in color)

Location: see 0333-96-0525

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0531

Date June 17, 1996 **Time** 1420 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 30 to 35 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		30'.10"	to ~~40'.10"~~	FT	.0	31'.10"	

KAB 6/17/96

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Many cumulonimbus clouds - thundershowers. Cool - 68°F Windsfr. W. 0-8mph

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 1 & 2

Roll # 8

Comments:

Sample: Sample collected along a vertical fracture lined with Rootlets. Tuff is semi-compact, unwelded tuff Unit 2 Tshirege - pinkish tan. Large pieces of pumice (~2" diameter) (Reddish, grayish, white & brown in color) slightly moist. Abundant phenocryst of qtz. Rootlets are white.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0532

Date June 17, 1996 **Time** 1445 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 35 to 40 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs: 35'.8" to 36'.10"

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		~~36'3"~~	~~to 0~~	~~37'.0~~	~~0~~	~~Ft.~~ KAB	6/17/96

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0531

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	bkgd.	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 3 & 4
Roll# 8

Comments: Sample: Sample collected from a zone of soft, friable tuff - semi-moist, pinkish-tan color. Abundant tuff (brown, gray, purplish in color). Abundant phenocrysts of qtz. No rootlets or alteration of minerals.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0533

Date June 17, 1996 **Time** 1500 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 40 to 45 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		42'.10" 0	43'.2" 0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0531

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 5 & 6

Roll # 8

Comments:

Sample: Sample collected from a fractured zone with altered mineralization and rootlets. Mineralized area is reddish in color, moist, and looks very clay-like in composition. Rootlets are white. Tuff has abundant phenocrysts of qtz and sanadine. Abundant pumice fragments (reddish, grayish, white, and purple in color)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0534

Date June ~~17~~ 18, 1996 KCAB 6/18/96 **Time** ~~1520~~ KCAB 0945 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 45 to 50 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi CA Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Contalner	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0531

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)		cpm	
33-01652	0 to	0	PID		ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo#

Roll#

Comments:

Sample: No Recovery for this interval 45 to 50 feet

decided to use this sample ID# for the duplicate of 0539

See 0333-96-0539 for info

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0535

Date June 17, 1996 **Time** 1540 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 50 to 55 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		54.0 to 0	54.6" 0	FT.	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0531

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01652	0 to 0	FID	N/A	ppm	
33-01652	0 to 0	Field HE	N/A		
33-01652	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to 0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to 0	PID	0	ppm	
33-01652	0 to 0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 7 & 8 W Rong sample ID # on white board.
Roll # 8

Comments:

Sample: Sample consisted of semi-compact, unwelded tuff. Pinkish tan - abundant phenocrysts of qtz. and sanadine. Abundant pumice present (~2.5" diameter) red, gray, purple, and white in color. Semi-moist. No rootlets. Sample collected from a zone that was slightly more friable than the rest of the core.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0536

Date June 17, 1996 **Time** 1555 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 55 to 60 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	51' to	0	51.7"	0	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0531

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 9 & 10 Wrong Sample Id on photo white board
Roll # 8

Comments:

Sample: Loosley compacted to semi-friable tuff. Much less pumice than previous intervals, pumice <5% and smaller diameter (.5") Reddish to grayish in color. Abundant phenocrysts of qtz., minor sanadine. Semi-moist, darker Reddish, tan color. No rootlets.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0537

Date June ~~13~~ 18, 1996 KCAB 6/17/96 **Time** 0900 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 60 to 65 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	KCAB ~~62" 6"~~ 6/18/9	~~to~~ 61 to 61-	~~0~~ 8" KCAB		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Clear, Warm - 75°F, Slight breeze from the S. 0-5mph.

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	6/17/96 ~~27~~ bkgd.	cpm	
33-01652	0 to	0	PID	KCAB 0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 11 & 12
Roll # 8

Comments:

Sample: Sample collected from a zone of moderately friable to semi-compacted tuff. Moderate phenocrysts of qtz and sanadine ~7%, Pumice is slightly altered, more flattened. ~3%. Tuff is semi-moist, Reddish tan.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0538

Date June 13, 1996 **Time** 0920 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 65 to 70 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs: 67'0" to 67'.9"

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 13 & 14
Roll# 8

Comments:

Sample: Collected from a horizontal fracture lined w/ rootlets and slight mineral alteration. Pumice is semi-compact to slightly crumbly. Abundant sanadine phenocryst and qtz. Minor pumice - although some of the pumice is much larger than what has been present ~ 2" diameter. Pumice is slightly altered - more orange red in color. Slightly moist, Reddish tan.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0539

Date June 13, 1996 **Time** 0945 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 70 to 75 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	73'4" to 74.6"	0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

7 mCi/L down hole

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 15 & 16
Roll #8

Comments:

Sample: Sample collected from a fracture that was highly altered in mineralization ~ clay-like, semi-moist Reddish material lining the fracture. Tuff was compact with minor pumice (altered, flattened, reddish-orange color) abundant sanadine phenocrysts and qtz. Semi moist.

Took a dup - 0534 Sample ID # used

50405

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0540

Date June 13, 1996 **Time** 1000 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 75 to 80 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs: ~~77.9" to~~ KAB

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		76.9" to	0 ~~80~~ 77'	06"	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

46 mCi/L down hole

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 17 & 18
Roll # 8

Comments:

Sample: Sample collected from a semi-compacted to semi-friable zone of fractures, abundant rootlets. Semi-rois tuff. Reddish-tan. Tuff is same as 0333-96-0539.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0541

Date June ~~18~~ 18, 1996 **Time** 1045

Technical Area 33 **Operable Unit** 1122

Sample Type Tuff

Sample Location 33-002(a) drainfield. 80 to 85 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Name (Print) Kristi Beguin

Signature Kristi A Beguin

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	82.6" to 83.3"	0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01652	0 to 0	FID	N/A	ppm	
33-01652	0 to 0	Field HE	N/A		
33-01652	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to 0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to 0	PID	0	ppm	
33-01652	0 to 0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 19 & 20

Roll # 8

Comments:

Sample: Semi-compact, gray unwelded tuff. Hit the interface of the Tshirege Unit IV tuff Right at 82.5 feet semi-moist. Abundant Pumice fragments 1/2" diameter

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0542

Date June 18, 1996 **Time** **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 85 to 90 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	86'.2" to 87'	0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

16 M Ci/L down hole

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 21 & 22

Roll # 8

Comments:

Sample: Sample collected from a very soft friable zone. Abundant phenocrysts of qtz and sanadine. Minor pumice wall friable. Semi-moist light grayish color.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0543

Date June 13, 1996 **Time** 1130 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 90 to 95 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		92.5 to 93.5	ft.		0	0	

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

30 mCi/L downhole

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 23 & 24

Roll # 8

Comments:

Sample: Sample collected from a soft, friable zone of gray non-welded tuff. Abundant pumice fragment ~1/2" diameter, (Reddish & grayish color) semi-moist. Abundant phenocrysts of qtz. and some sanadine.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0544

Date June 18, 1996 **Time** 1145 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 95 to 100 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A. Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	99 to 100	0	Ft.	0	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 25 & 26

Roll # 8

Comments:

Sample: Sample collected from a Region of semi-friable to (crumbly) semi-compact gray unwelded tuff Moderate pumice fragments (1/2" diameter) Moderate Sanadine & qtz phenocrysts. Semi-moist.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0545

Date June 18, 1996 **Time** 1200 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 100 to 105 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs: 102' to 102'.6"

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		0	0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

30 MCi/gL down hole
KMB 6/18/96

Photo (Roll, Frame, Azimuth, Subject, Participants):
Photo # 27 & 28
Roll # 8

Comments:
Sample: Same as 0333-96-0545.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0546

Date June ~~13~~ 18, 1996 KMB 6/18/96 **Time** ~~1210~~ KMB 6/18/96 1220 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 105 to 110 foot interval

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652		106.6" to	107.6"		0	Ft.	

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	Bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

70 nCi/L downhole

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 29 & 30

Roll # 8

Comments:

Sample: Collected from a zone of very soft, friable tuff. Gray in color, semi-moist, no obvious pumice fragments. Minor to moderate qtz. & sanidine phenocrysts.

64 nCi/L downhole once core barrel was removed.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0547

Date June ~~13~~ 18, 1996 **Time**

Technical Area 33 **Operable Unit** 1122 KAB 6/18/96

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Sample Type Tuff

Sample Location 33-002(a) drainfield. 110 to 115 foot interval.

Name (Print) Kristi Beguin

Signature Kristi Beguin

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	113' to 113.8"	0	0	Ft.	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants): 42 mCi/L down-hole

Photo# 31 & 32

Roll# 8

Comments:

Sample: Same as 0333-96-0546 only slightly more compacted, and there is moderate pumice fragments intermixed in the sample. Semi-moist.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0548

Date June 13, 1996 **Time** 1245 **Sample Type** Tuff

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-002(a) drainfield. 115 to 120

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A. Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01652	117'.6" to	0	118'.3"	0	Ft.	0	

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	H2O+H3	500 ml Polyethylene	None	1122-96-2066
02	RVH20+RVH3	125 ml Polyethylene	None	1122-96-2067

Weather Same as 0333-96-0537

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01652	0 to	0	FID	N/A	ppm	
33-01652	0 to	0	Field HE	N/A		
33-01652	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01652	0 to	0	Field Rad (beta/gam)	bkgd.	cpm	
33-01652	0 to	0	PID	0	ppm	
33-01652	0 to	0	XRF	N/A	ppm	

105mCi/L down hole

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 33 & 34

Roll # 8

Comments:

Sample: Sample collected from a soft friable zone w/ moderate pumice fragments (reddish, brownish in color, flattened) ~ 1/2" diameter, tuff is gray, semi-moist. Moderate phenocrysts of qtz. and sanadine.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0549

Date ~~June 19,~~ 6/20/96 1996 **Time** 0915 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(e). 33-1653. 0 to 10 ft.

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01653		1'2" ~~3'7"~~ KE 6/20/96	Ø ~~4'4"~~ KE 6/20/96	Ø 1'11"	0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2070
02	HEXP	125 ml Glass	Ice	1122-96-2070
03	METTAL	125 ml Polyethylene	Ice	1122-96-2070
04	SEMI	125 ml Glass	Ice	1122-96-2070
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2070

Weather ~ 75° F Light wind from the east. Clear skies.

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01653	0 to	0	FID	N/A	ppm	
33-01653	0 to	0	Field HE	N/A		
33-01653	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01653	0 to	0	Field Rad (beta/gam)	280	cpm	17,920 cpm NaI2
33-01653	0 to	0	PID	Ø	ppm	
33-01653	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #8
Photo #35 core 0 - 2.5'

Roll #9
Photo #1 = 2.5 - 5.0'; #2 = 5.0 - 7.5'; #3 = 7.5 - 10.0'

Comments: NO PID response

Soil: Soil/tuff interface 1' 5", 2" layer of clay-like weathered tuff. Soil above tuff - loamy silt + minor sand with eng. + tuff gravel, moderate organic material, slightly moist to dry. Light brown

Location: 33-1653

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0550

Date ~~June 19, 1996~~ 6/20/96 **Time** 0940 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(e). 33-1653. 10 to 20 ft.

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01653		17' Ø	17.5' Ø		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2070
02	HEXP	125 ml Glass	Ice	1122-96-2070
03	METTAL	125 ml Polyethylene	Ice	1122-96-2070
04	SEMI	125 ml Glass	Ice	1122-96-2070
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2070

Weather See 0333-96-0549

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01653	0 to	0	FID	N/A	ppm	
33-01653	0 to	0	Field HE	N/A		
33-01653	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01653	0 to	0	Field Rad (beta/gam)	240	cpm	18,110 cpm NaI2
33-01653	0 to	0	PID	Ø	ppm	
33-01653	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9

photo #4 = 10-15'; #5 = 15-17.5'; #6 = 17.5-20'; #7 = 20-22.5'

Comments:

Slightly friable - semicompacted tuff. slightly moist, moderate pumice fragments (1/2" = d). Gray - slightly red pumice. Tuff is tan colored. white calcium-looking deposit on tuff. moderate quartz phenocrysts (~3%).

Location: 33-1653

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0551

Date ~~June 19, 1996~~ 6/20/96 Time ~~1015~~ 1020 Sample Type Soil - Subsurface

Technical Area 33 Operable Unit 1122 Sample Location 33-008(e). 33-1653. 20 to 30 ft.

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01653		24' Ø	25' Ø		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C'of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2070
02	HEXP	125 ml Glass	Ice	1122-96-2070
03	METTAL	125 ml Polyethylene	Ice	1122-96-2070
04	SEMI	125 ml Glass	Ice	1122-96-2070
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2070

Weather See 0333-96-0549

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01653	0 to	0	FID	N/A	ppm	
33-01653	0 to	0	Field HE	N/A		
33-01653	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01653	0 to	0	Field Rad (beta/gam)	330	pcpm	18,340 cpm on NaI
33-01653	0 to	0	PID	Ø	ppm	
33-01653	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9

Photo # 8 & 9 from 22.5 - 25'; # 10 = 25-27.5'; did not take photo; # 10 = 27.5 to 30'; #11 30 to 32.5; #12 = 32.5-35'; #13 = 35

Comments: Slightly friable to semi-compacted tuff. Slightly moist. Moderate pumice fragments (~1/4" = d) Tan colored tuff. Gray - slightly red pumice. white calcium looking deposits in the tuff. Moderate quartz phenocrysts

Location: 33-1653

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0552

Date ~~June 19, 1996~~ 6/20/96 **Time** 1050 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(e). 33-1653. 30 to 40 ft.

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01653		39' 0	40' 0		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2070
02	HEXP	125 ml Glass	Ice	1122-96-2070
03	METTAL	125 ml Polyethylene	Ice	1122-96-2070
04	SEMI	125 ml Glass	Ice	1122-96-2070
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2070

Weather Same as 0333-96-0544

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01653	0 to	0	FID	N/A	ppm	
33-01653	0 to	0	Field HE	N/A		
33-01653	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01653	0 to	0	Field Rad (beta/gam)	370	cpm	18,310 cpm NaI_2
33-01653	0 to	0	PID	Ø	ppm	
33-01653	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9
Photo #13 (37.5-40')

Comments: Hit the interface to the Tshirege Unit I_V at 34 Ft. Tshirege IV: moderate (~10%) pumice which is brown. Tuff is slightly moist. non-compact, semi friable. Light gray tuff. No phenocrys present

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0553

Date June 19, 1996 **Time** 1430 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(e). 33-1654. 0 to 10 ft.

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01654		1' ~~0~~	2' ~~0~~		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2071
02	HEXP	125 ml Glass	Ice	1122-96-2071
03	METTAL	125 ml Polyethylene	Ice	1122-96-2071
04	SEMI	125 ml Glass	Ice	1122-96-2071
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2071

Weather ~90°F Light winds from west (0-8 mph), mostly clear w/a few high clouds

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01654	0 to	0	FID	N/A	ppm	
33-01654	0 to	0	Field HE	N/A		
33-01654	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01654	0 to	0	Field Rad (beta/gam)	~~260~~	cpm	17,120 cpm NaI2
33-01654	0 to	0	PID	~~0~~	ppm	
33-01654	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9

Photo #16 (0-2.5'); #17 (2.5-5.0'); #18 (5-7.5'); #19 (7.5-10'); #20 (10-

Comments: soil/Tuff interface. Soil at surface is light brown moderate organic matter (layer is 2" thick). Abundant tuff + eng. gravel along with minor sands. Tuff is light gray. minor pumice which is brown/red. minor quartz phenocrysts.

Location. ~~16~~ WE 6/20/96 33-1654

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0554

Date ~~June 19, 1996~~ 6/20/96 **Time** 1515 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(e). 33-1654. 10 to 20 ft.

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01654		14' ~~0~~	15' ~~0~~		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2071
02	HEXP	125 ml Glass	Ice	1122-96-2071
03	METTAL	125 ml Polyethylene	Ice	1122-96-2071
04	SEMI	125 ml Glass	Ice	1122-96-2071
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2071

Weather See 0333-96-0553

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01654	0 to	0	FID	N/A	ppm	
33-01654	0 to	0	Field HE	N/A		
33-01654	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01654	0 to	0	Field Rad (beta/gam)	219	cpm	17,840 cpm NaI2
33-01654	0 to	0	PID	Ø	ppm	
33-01654	0 to	0	XRF	N/A	ppm	

H3 28 nCi/L downhole at 15ft. TD

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9

Photo #21 (12.5-15'); #22 (15-17.5'); #23 (17.5-20); #24 (20-22.5')

Comments: Light gray tuff with minor pumice & quartz phenocrysts. Semi compacted, hard. Minor organic matter (rootlets). Semi moist

Location: 33-1654

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0555

Date ~~June 19,~~ 6/20/96 1996 **Time** 1604 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(e). 33-1654. 20 to 30 ft.

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01654		24' ø	25' ø		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2071
02	HEXP	125 ml Glass	Ice	1122-96-2071
03	METTAL	125 ml Polyethylene	Ice	1122-96-2071
04	SEMI	125 ml Glass	Ice	1122-96-2071
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2071

Weather See 0333-96-0553

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01654	0 to	0	FID	N/A	ppm	
33-01654	0 to	0	Field HE	N/A		
33-01654	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01654	0 to	0	Field Rad (beta/gam)	240	cpm	17,870 cpm NaI
33-01654	0 to	0	PID	ø	ppm	
33-01654	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #9

Photo #25; Photo 26: 25 to 27.5; #27: 27.5 to 30; #28: 30-32.5; #29: 32.5-

Comments: Sample: Light gray tuff with minor pumice (an even lighter gray) and minor phenocrysts of quartz. Tuff is semi compacted and hard, semi moist.

Location: 33-1654.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0556

Date June 19, 1996 **Time** 1655 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-008(e). 33-1654. 30 to 40 ft.

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01654	39	40	40	Ft.	0		TD of borehole

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2071
02	HEXP	125 ml Glass	Ice	1122-96-2071
03	METTAL	125 ml Polyethylene	Ice	1122-96-2071
04	SEMI	125 ml Glass	Ice	1122-96-2071
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2071

Weather Same as 0333-96-0553

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01654	0 to	0	FID	N/A	ppm	
33-01654	0 to	0	Field HE	N/A		
33-01654	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01654	0 to	0	Field Rad (beta/gam)	240	cpm	
33-01654	0 to	0	PID	0	ppm	18,230 No l_2
33-01654	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # ~~30~~ #30 is of 35 to 37.5 ft. #31: 37.5 to 40

Comments:

Sample: Hit the ~~Ab~~ KAB 6/20/96 Tshirege Unit 1v at 39 feet depth. Sample collected from 39 to 40 feet depth. All soft, friable tuff, gray, slightly moist.

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-1005

Date ~~June 19, 1996~~ 6/20/96 Time ~~1050~~

Sample Type Soil - Subsurface

Technical Area 33 Operable Unit 1122

Sample Location 33-008(e). 33-1653. 20 to 30 ft.

QA/QC Type None

Composite: ○ Yes ◉ No

Name (Print) Kristi Beguin

Composite Type: None

Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01653		24' ~~39'~~ ~~0~~	~~40'~~ ~~0~~ 25'		0		

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	GROSSAB+GROSSG+GSCAN+H2O+H3+ISC	500 ml Polyethylene	None	1122-96-2070
02	HEXP	125 ml Glass	Ice	1122-96-2070
03	METTAL	125 ml Polyethylene	Ice	1122-96-2070
04	SEMI	125 ml Glass	Ice	1122-96-2070
05	VOAGCMS	125 ml Septum Amber gl	Ice	1122-96-2070

Weather

Sample Description Same as 0333-96-0551

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01653	0 to	0	FID	N/A	ppm	
33-01653	0 to	0	Field HE	N/A		
33-01653	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01653	0 to	0	Field Rad (beta/gam)	370	cpm	18,560 cpm unit 2
33-01653	0 to	0	PID	Ø	ppm	
33-01653	0 to	0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, ~~Participants~~):

~~Roll #9~~

~~Photo #13 (37.5-40')~~ See 0333-96-0551

Comments: Tschirege unit IV: ~~Moderate (~10%) pumice, which is brown.~~ Tuff is slightly moist. Non-compact, semi friable. ~~Light gray tuff~~ No phenocrysts present See 0333-96-0551

Location: 33-1653

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0130

Date June 26, 1996 **Time** 0900 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/ Random

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01585	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather overcast, still, 75° F

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01585	0 to	0	FID	N/A	ppm	
33-01585	0 to	0	Field HE	N/A		
33-01585	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01585	0 to	0	Field Rad (beta/gam)	N/A	cpm	15,940 NaI$_2$
33-01585	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #32
Roll # 9

Comments: Gray to light brown silt + sand with eng. gravels from 1/2 - 1" diameter. Tuff gravel 1/2 - 1" diameter, minor organics (Rootlets). Dry. *Asphalt chunks around sample location.

Location: * recently bulldozed. Brushy area

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0131

Date June 26, 1996 **Time** 0915 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/Random

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01586	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather Same as 0333-96-0130

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01586	0 to	0	FID	N/A	ppm	
33-01586	0 to	0	Field HE	N/A		
33-01586	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01586	0 to	0	Field Rad (beta/gam)	N/A	cpm	16,210 cpm NaI_2
33-01586	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 33

Roll #9

Comments: Gray to light brown sand + silt, minor organics (rootlets) Tuff + eng. gravels up to 1/2" diam. Dry

Location: Brushy area down slope from 33-129. Some litter

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0132

Date June 26, 1996 **Time** 1005 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/Random

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01587	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0130

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01587	0 to	0	FID	N/A	ppm	
33-01587	0 to	0	Field HE	N/A		
33-01587	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01587	0 to	0	Field Rad (beta/gam)	N/A	cpm	15,920 cpm NaI
33-01587	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 36

Roll # 9

Comments: See: 0333-96-0131 for sample description + Location

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0133

Date June 26, 1996 **Time** 0945 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/Random

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01588	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather Same as 0333-96-0130

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01588	0 to	0	FID	N/A	ppm	
33-01588	0 to	0	Field HE	N/A		
33-01588	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01588	0 to	0	Field Rad (beta/gam)	N/A	cpm	17,030 cpm NaI2
33-01588	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #34
Roll #9

Comments:

Sample: Same as 0333-96-0131

Location: Same as 0333-96-0131

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0134

Date June 26, 1996 **Time** 1000 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/Random

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01589	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0130

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01589	0 to	0	FID	N/A	ppm	
33-01589	0 to	0.	Field HE	N/A		
33-01589	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01589	0 to	0	Field Rad (beta/gam)	N/A	cpm	15,710 cpm NaI2
33-01589	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #35

Roll #9

Comments: Sample: see 0333-96-0131

Location: see 0333-96-0131

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0135

Date June 26, 1996 **Time** 1010 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/Random

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01590		Surface 0	6" 0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0130

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01590	0 to	0	FID	N/A	ppm	
33-01590	0 to	0	Field HE	N/A		
33-01590	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01590	0 to	0	Field Rad (beta/gam)	N/A	cpm	16,050 cpm on I_2
33-01590	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #37
Roll #9

Comments: See 0333-96-0131 w/Abundant organics (rootlets)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0136

Date June 26, 1996 **Time** 1025 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/Random

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01591	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather see 0333-96-0130

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01591	0 to	0	FID	N/A	ppm	
33-01591	0 to	0	Field HE			
33-01591	0 to	0	Field Rad (alpha)	N/A	cpm	13,040
33-01591	0 to	0	Field Rad (beta/gam)	N/A	cpm	~~15820~~ cpm NaI2
33-01591	0 to	0	PID	N/A 0	ppm	NE 6/26/96

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #1 placard is wrong ignore photo | Photo #3 Roll #10

Comments: see 0333-96-0131 + moderate organics

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0137

Date June 26, 1996 **Time** 1015 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/Random

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01592	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0130

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01592	0 to	0	FID	N/A	ppm	
33-01592	0 to	0	Field HE	N/A		
33-01592	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01592	0 to	0	Field Rad (beta/gam)	N/A	cpm	15,820
33-01592	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #2

Roll # 10

Comments: See 0333-96-0131 + abundant organics

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0138

Date June 26, 1996 **Time** 1350 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01593		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather Partly cloudy, humid - 78°F. Winds from SW 0-5mph

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01593	0 to	0	FID	N/A	ppm	
33-01593	0 to	0	Field HE	N/A		
33-01593	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01593	0 to	0	Field Rad (beta/gam)		cpm	15,510 NaI2
33-01593	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # of sample in culvert, sample bottle present
Roll 10

Comments:

Sample: Mostly Medium to coarse sands with minor silts and minor organics (roots, leaves) light to medium brown color. Slightly moist.

Location: At a sediment trap just before a 1 foot diameter culvert in the Main drainage at Main site. On the West end of the culvert (where security fence used to be)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0139

Date June 26, 1996 **Time** 1345 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01594		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather Same as 0333-96-0139

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01594	0 to	0	FID	N/A	ppm	
33-01594	0 to	0	Field HE	N/A		
33-01594	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01594	0 to	0	Field Rad (beta/gam)		cpm	14,210 Na/2
33-01594	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #

Roll 10 (of sample in drainage, large culvert in drainage)

Comments:

Sample: Medium to coarse sands with moderate organics (roots, leaves, grasses) minor intermixed silts. Dry. Light brown color

Location. At a sediment trap in the Main drainage at Main Site.

KCAB this sample is west of 0138

6/27/96

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0140

Date June 26, 1996 **Time** 1100 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01595	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-014

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01595	0 to	0	FID	N/A	ppm	
33-01595	0 to	0	Field HE	N/A		
33-01595	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01595	0 to	0	Field Rad (beta/gam)	N/A	cpm	14,710 cpm La/2
33-01595	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 8
Roll #10

Comments: Light gray sand & silt w/ abundant ang + buff gravels. Dry. minor organics

Location: see 0145

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0141

Date June 26, 1996 **Time** 1120 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01596	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0145

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01596	0 to	0	FID	N/A	ppm	
33-01596	0 to	0	Field HE	N/A		
33-01596	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01596	0 to	0	Field Rad (beta/gam)	N/A	cpm	15,320 cpm Na I z
33-01596	0 to	0	PID	0 ~~N/A~~	ppm	

NE 6/26/96

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo ~~#8~~ NE #9 6/26/96

Roll # 10

Comments:

Sample: Abundant organics + (eng. + tuff gravel) Light gray sand + Silts. Dry.

Location: see 0333-96-0145

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0142

Date June 26, 1996 **Time** 11 25 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01597	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather see 0333-96-0145

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01597	0 to	0	FID	N/A	ppm	
33-01597	0 to	0	Field HE	N/A		
33-01597	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01597	0 to	0	Field Rad (beta/gam)	N/A	cpm	14,530 cpm NaI2
33-01597	0 to	0	PID	0.2	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo #10
Roll #10

Comments:

Sample: very dark sands with abundant eng. gravels. Soil is likely darkly stained from dumped material. Moderate odor. Semi-moist. minor gray tuff gravel, minor organics

Location: Just below the graded surface behind 33-39, Underneath brush and old wooden barricade.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0143

Date June 26, 1996 **Time** 1130 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01598	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0145

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01598	0 to	0	FID	N/A	ppm	
33-01598	0 to	0	Field HE	N/A		
33-01598	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01598	0 to	0	Field Rad (beta/gam)	N/A	cpm	14,350 cpm Na/2
33-01598	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 11

Roll #10

Comments:

Sample: Light brown soil w/moderate engineering gravels. Dry, moderate organics (rootlets).

Location: Brushy slope below 33-39

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0144

Date June 26, 1996 **Time** 1050 **Sample Type** Soil - Surface Subsurface of 0333-96-0146

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-0~~1599~~	1601	0	18	in.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0145

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-~~01599~~	1601	0 to 0	FID	N/A	ppm	
33-~~01599~~	1601	0 to 0	Field HE	N/A		
33-~~01599~~	1601	0 to 0	Field Rad (alpha)	N/A	cpm	
33-~~01599~~	1601	0 to 0	Field Rad (beta/gam)	N/A	cpm	13,620 cpm Na/2
33-~~01599~~	1601	0 to 0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 6
Roll #10

Comments: below 0333-96-0146 Sampled from 18" which is soil/Tuff interface. Soil is light brown sand w/ minor organics, Tuff is light gray. Dry

Location: see 0145

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0145

Date June 26, 1996 **Time** 1035 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01600	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0130 clouds clearing wind from S picking up (10-15 mph)

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01600	0 to	0	FID	N/A	ppm	
33-01600	0 to	0	Field HE	N/A		
33-01600	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01600	0 to	0	Field Rad (beta/gam)	N/A	cpm	13,060
33-01600	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #4
Roll #10

Comments:

Sample - Backfill - light brown sand with small ang. & tuff gravels. No organics, dry.

location: on level area behind bldg 33-39. Some grasses. adjacent to an unimproved gravel road.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0146

Date June 26, 1996 **Time** 1040 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01601	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0145

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01601	0 to	0	FID	N/A	ppm	
33-01601	0 to	0	Field HE	N/A		
33-01601	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01601	0 to	0	Field Rad (beta/gam)	N/A	cpm	13,980cpm NaI2
33-01601	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 5
Roll #10

Comments:

Sample; Same as 0333-96-0145 + moderate organics. Dry

Location; see 0333-96-0145

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0147

Date June 26, 1996 **Time** ~~0900~~ 1055 NE 6/26/96 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/SVOC/Biased

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenneth Hansel

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01602	surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	125 ml Glass	Ice	1122-96-2073

Weather See 0333-96-0145

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01602	0 to	0	FID	N/A	ppm	
33-01602	0 to	0	Field HE	N/A		
33-01602	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01602	0 to	0	Field Rad (beta/gam)	N/A	cpm	15,120 cpm NaI_2
33-01602	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 7
Roll #10

Comments:

Sample: Abundant organics (rootlets) Light brown soil w/ abundant powdery gray tuff, Moderate avg. gravel + tuff. Dry.

Location: see 0145

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0148

27 NE 6/28/96

Date June ~~26~~, 1996 Time 0915 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01603	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather Winds from S (10-15 mph) 70°F, mostly cloudy

Sample Description See below.

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01603	0 to	0	FID	N/A	ppm	
33-01603	0 to	0.	Field HE			
33-01603	0 to	0	Field Rad (alpha)		cpm	
33-01603	0 to	0	Field Rad (beta/gam)		cpm	
33-01603	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #16

Roll #10

Comments: medium Brown sand w/ minor clay. minor organics, moist.

PCB Screening: < 0.5ppm.

Location: in Gravel road behind 33-39

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0149

Date June ~~26~~ 27 NE 6/28/96, 1996 Time 0920 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01604	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01604	0 to	0	FID	N/A	ppm	
33-01604	0 to	0	Field HE			
33-01604	0 to	0	Field Rad (alpha)		cpm	
33-01604	0 to	0	Field Rad (beta/gam)		cpm	
33-01604	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #17

Roll #10

Comments: Dark brown sand with some chunks of asphalt. moist.

PCB Screening: 0.5-1.0 ppm

Location: crack in asphalt

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0150

Date June ~~26~~ 27 ME, 1996 6/28/96 **Time** 0925 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01605	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01605	0 to	0	FID	N/A	ppm	
33-01605	0 to	0	Field HE			
33-01605	0 to	0	Field Rad (alpha)		cpm	
33-01605	0 to	0	Field Rad (beta/gam)		cpm	
33-01605	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 18

Roll # 10

Comments: Same as 0149

PCB Screening: <0.5ppm

Location: crack in asphalt

Los Alamos National Laboratory Environmental Restoration Program

27 ~~25~~ SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0151

Date June ~~25~~, 1996 6/28/96 Time 0930 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01606	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01606	0 to	0	FID	N/A	ppm	
33-01606	0 to	0	Field HE	↓		
33-01606	0 to	0	Field Rad (alpha)	↓	cpm	
33-01606	0 to	0	Field Rad (beta/gam)	↓	cpm	
33-01606	0 to	0	PID	↓	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 10

Photo # 19

Comments: medium brown sand with chunks of asphalt. moist.

PCB Screening: 1.1 - 4.0 ppm

Location: crack in Asphalt.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0152

Date June ~~26~~ 27 1996 6/28/96 Time 0935 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01607	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01607	0 to	0	FID	N/A	ppm	
33-01607	0 to	0	Field HE			
33-01607	0 to	0	Field Rad (alpha)		cpm	
33-01607	0 to	0	Field Rad (beta/gam)		cpm	
33-01607	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 20

Roll # 10

Comments: medium brown silty sand w/ minor clay. moist

PCB Screening: 0.5-1.0 ppm

Location: Crack in asphalt.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0153

Date June ~~28~~ 27 ME, 1996 6/28/96 Time 0940 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01608	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01608	0 to	0	FID		ppm	
33-01608	0 to	0	Field HE			
33-01608	0 to	0	Field Rad (alpha)		cpm	
33-01608	0 to	0	Field Rad (beta/gam)		cpm	
33-01608	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 21

Roll # 10

Comments: Light brown silty Sand. moderate avg. gravel. minor organics. no, ST.

PCB Screening: < 0.5ppm

Location: in gravel road behind 33-39

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0154

Date June ~~26~~ 27 NE, 1996 6/28/96 Time 0942 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01609		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather see 0148

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01609	0 to	0	FID		ppm	
33-01609	0 to	0	Field HE			
33-01609	0 to	0	Field Rad (alpha)		cpm	
33-01609	0 to	0	Field Rad (beta/gam)		cpm	
33-01609	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo #22

Roll #10

Comments: Light brown fine sand+silt. Minor organics. very moist.

PCB Screening: <0.5 ppm.

Location; in gravel

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0155

Date June ~~26~~ 27 NE 6/28/96, 1996 Time 0945 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01610	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01610	0 to	0	FID	N/A	ppm	
33-01610	0 to	0	Field HE			
33-01610	0 to	0	Field Rad (alpha)		cpm	
33-01610	0 to	0	Field Rad (beta/gam)		cpm	
33-01610	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #23

Roll #10

Comments: medium brown sand + silt, moderate organics. minor ang. gravel, moist.

PCB Screening: <0.5 PPM

Location: in gravel road behind 33-39

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0156

27 NE

Date June ~~26~~, 1996 6/28/96 Time 0946 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01611	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather see 0148

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01611	0 to	0	FID	N/A	ppm	
33-01611	0 to	0	Field HE	↓		
33-01611	0 to	0	Field Rad (alpha)	↓	cpm	
33-01611	0 to	0	Field Rad (beta/gam)	↓	cpm	
33-01611	0 to	0	PID	↓	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 24

Roll # 10

Comments: medium brown fine sand + silt. moderate organics + tuff gravel moist.

PCB Screening: <0.5 ppm

Location: Brushy area below outfall pipe.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0157

Date June ~~26~~ 27 1996 6/28/96 Time 1405 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01612		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01612	0 to	0	FID		ppm	
33-01612	0 to	0	Field HE			
33-01612	0 to	0	Field Rad (alpha)		cpm	
33-01612	0 to	0	Field Rad (beta/gam)		cpm	
33-01612	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments: medium brown sand + silt. Abundant organics. moist.

PCB Screening: 1.1 – 4.0 ppm

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0158

Date June ~~26~~ 27 ME, 1996 6/28/96 **Time**

Sample Type Soil - Surface

Technical Area 33 **Operable Unit** 1122

Sample Location 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No

Name (Print) Kristi Beguin

Composite Type: None

Signature _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01613	surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather see 0148

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01613	0 to	0	FID	N/A	ppm	
33-01613	0 to	0	Field HE			
33-01613	0 to	0	Field Rad (alpha)	↓	cpm	
33-01613	0 to	0	Field Rad (beta/gam)	↓	cpm	
33-01613	0 to	0	PID	↓	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # ~~27~~ ME 6/27/96 #28

Roll # 10

Comments: medium brown fine-coarse sand, abundant organics. moderate eng. gravel. moist.

PCB Screening: <0.5 ppm

Location: brushy slope below 33-39

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0159

Date June ~~28~~ 27, 1996 NE 6/28/96 **Time** 0947 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01614	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description see below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01614	0 to 0	FID	N/A	ppm	
33-01614	0 to 0	Field HE	↓		
33-01614	0 to 0	Field Rad (alpha)	↓	cpm	
33-01614	0 to 0	Field Rad (beta/gam)	↓	cpm	
33-01614	0 to 0	PID	↓	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 25

Roll #10

Comments: ~~Nedi~~ NE 6/28/96 same as -0158

PCB Screening: 1.1 to 4.0 ppm

Location: brushy area below 33-39 - on slope

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0160

27 NF2 6/28/96

Date June ~~26~~, 1996 **Time** 0948 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01615	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather See 0148

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01615	0 to	0	FID		ppm	
33-01615	0 to	0	Field HE			
33-01615	0 to	0	Field Rad (alpha)		cpm	
33-01615	0 to	0	Field Rad (beta/gam)		cpm	
33-01615	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 26

Roll #10

Comments: Light brown fine-coarse sand. Abundant organics + both eng + tuff gravel. moist.

PCB Screening: 1.1 to 4.0 ppm

Location: brushy slope below 33-39

Los Alamos National Laboratory Environmental Restoration Program

27 MB 6/28/96

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0161

Date June ~~26~~, 1996 **Time** 0955 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-017/PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01616	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	PCB	125 ml Glass	None	1122-96-2073

Weather see 0148

Sample Description see below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01616	0 to 0	FID		ppm	
33-01616	0 to 0	Field HE			
33-01616	0 to 0	Field Rad (alpha)		cpm	
33-01616	0 to 0	Field Rad (beta/gam)		cpm	
33-01616	0 to 0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments: medium brown silt + fine sand. Abundant organic matter, moist.

PCB: 1.1 to 4.0 mg/kg

PCB Screening:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0561

Date June 27, 1996 **Time** 1025 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01736	Surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control

Weather Overcast, Rainy, cool - 64°F. Winds from the W - 0-5 mph

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01736	0 to	6 in	FID	N/A	ppm	
33-01736	0 to	6 in	Field HE			
33-01736	0 to	6 in	Field Rad (alpha)		cpm	
33-01736	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01736	0 to	6 in	PID		ppm	
33-01736	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 29

Roll #10

Comments: Mostly sand with minor intermixed silts. Moderate organics - Very moist. Dark brown in color. Minor tuff gravels

PCB Screening Result: neg. <0.5 ppm

Location: Grassy grass field near 33-95

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0562

Date June 27, 1996 **Time** 1028 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01737	Surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Same as 0333-96-0561

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01737	0 to	6 in	FID	N/A	ppm	
33-01737	0 to	6 in	Field HE	↓		
33-01737	0 to	6 in	Field Rad (alpha)	↓	cpm	
33-01737	0 to	6 in	Field Rad (beta/gam)	↓	cpm	
33-01737	0 to	6 in	PID	↓	ppm	
33-01737	0 to	6 in	XRF	↓	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 30

Roll # 10

Comments:

Sample: Same as 0333-96-0561

PCB screening result: neg < 0.5 ppm

Location: same as -0561

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0563

Date June 27, 1996 **Time** 1030 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01738	Surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Same as 0333-96-0561

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01738	0 to	6 in	FID	N/A	ppm	
33-01738	0 to	6 in	Field HE			
33-01738	0 to	6 in	Field Rad (alpha)		cpm	
33-01738	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01738	0 to	6 in	PID		ppm	
33-01738	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 31

Roll # 10

Comments:

Sample: Same as 0333-96-0561

PCB Screening Result: neg < 0.5 ppm

Location: same as-0561

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0564

Date June 27, 1996 **Time** 1031 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01739	Surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Same as 0333-96-0561

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01739	0 to	6 in	FID	N/A	ppm	
33-01739	0 to	6 in	Field HE			
33-01739	0 to	6 in	Field Rad (alpha)		cpm	
33-01739	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01739	0 to	6 in	PID		ppm	
33-01739	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 32

Roll # 10

Comments:

Sample: Same as 0333-96-0561, only slightly more course sands

PCB screening Result: neg < 0.5 ppm

Location: Same as -0561

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0565

Date June 27, 1996 **Time** 1032 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01740	Surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Same as 0333-96-0561

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01740	0 to	6 in	FID	N/A	ppm	
33-01740	0 to	6 in	Field HE			
33-01740	0 to	6 in	Field Rad (alpha)		cpm	
33-01740	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01740	0 to	6 in	PID		ppm	
33-01740	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 33

Roll # 10

Comments:

Sample: Same as 0333-96-0561

PCB Screening Result: neg < 0.5 ppm

Location: Same as 0561

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0566

Date June 27, 1996 **Time** 1040 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01741	Surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Same as 0333-96-0561

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01741	0 to	6 in	FID	N/A	ppm	
33-01741	0 to	6 in	Field HE			
33-01741	0 to	6 in	Field Rad (alpha)		cpm	
33-01741	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01741	0 to	6 in	PID		ppm	
33-01741	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #37

Roll #10

Comments:

Sample: Same as 0333-96-0561, only slightly more Red in color

PCB Screening: <0.5 ppm

Location: Same as -0561

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0567

Date June 27, 1996 **Time** 1038 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01742	surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Same as 0333 96 - 0561

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01742	0 to	6 in	FID	N/A	ppm	
33-01742	0 to	6 in	Field HE			
33-01742	0 to	6 in	Field Rad (alpha)		cpm	
33-01742	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01742	0 to	6 in	PID		ppm	
33-01742	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 36

Roll #10

Comments:

Sample: Same as 0333-96-0561, slightly more coarse sands

PCB Screening Result: 0.5-1.0 ppm.

Location: same as 0561

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0568

Date June 27, 1996 **Time** 1036 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01743	Surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Same as 0333-96-0561

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01743	0 to	6 in	FID	N/A	ppm	
33-01743	0 to	6 in	Field HE			
33-01743	0 to	6 in	Field Rad (alpha)		cpm	
33-01743	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01743	0 to	6 in	PID		ppm	
33-01743	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 35

Roll # 10

Comments:

Sample: Same as 0333-96-0561

PCB Screening: 0.5-1.0 ppm

Location: Same as -0561

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0569

Date June 27, 1996 **Time** 1034 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-003(b) / PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01744	Surface	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Same as 0333-96-0561

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01744	0 to	6 in	FID	N/A	ppm	
33-01744	0 to	6 in	Field HE			
33-01744	0 to	6 in	Field Rad (alpha)		cpm	
33-01744	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01744	0 to	6 in	PID		ppm	
33-01744	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 34

Roll #10

Comments:

Sample: Same as 0333-96-0561, except more course sands, slightly darker brown color.

PCB Screening Results: <0.5ppm.

Location: Same as 0561

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0110

Date July 1, 1996 **Time** 1010 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)--beneath asphalt. "Hot spot" sample

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01570	~~Sub~~ Surface	0	0		0		

MCB 7/1/96

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	None	1122-96-2074

Weather scattered clouds, 70°F, light breeze from east (0-5 mph)

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01570	0 to 0	FID	N/A	ppm	
33-01570	0 to 0	Field HE	N/A		
33-01570	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01570	0 to 0	Field Rad (beta/gam)		cpm	27,120
33-01570	0 to 0	PID		ppm	
33-01570	0 to 0	XRF	N/A	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 17
Roll # 11

Comments:
soil: Dark brown sand + silt. moderate organics + eng. gravel. moist.

Location: ~35' S of SE corner 33-20. located in drainage ditch
Abundant eng. gravel, asphalt and grasses around sample location.
Soil collected from between asphalt and large tuff boulders.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0111

Date July 1, 1996 **Time** 0935 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)--beneath asphalt

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01566	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2074
02	TU	125 ml Polyethylene	None	1122-96-2074

Weather See -0110

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01566	0 to	0	FID	N/A	ppm	
33-01566	0 to	0	Field HE	N/A		
33-01566	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01566	0 to	0	Field Rad (beta/gam)		cpm	
33-01566	0 to	0	~~PCB~~ KAB 7/11/96		ppm	
33-01566	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #12

Roll #11

Comments:

Soil: Same as -0112.

Location: under Asphalt ~12' north of 33-20

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0112

Date July 1, 1996 **Time** 0430 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)--beneath asphalt

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01567	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2074
02	TU	125 ml Polyethylene	None	1122-96-2074

Weather See -0110

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01567	0 to	0	FID	N/A	ppm	
33-01567	0 to	0	Field HE	N/A		
33-01567	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01567	0 to	0	Field Rad (beta/gam)		cpm	
33-01567	0 to	0	KCAB 7/11/96 ~~PCB~~		ppm	
33-01567	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #11
Roll #11

Comments:

Soil: Dark brown sand + silt. chunks of eng. gravel (moderate amount). moist, no organics

Location: Below Asphalt @ NE corner of 33-20 ~20' from bldg.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0113

Date July 1, 1996 **Time** 1005 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)--beneath asphalt

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01568		0	0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2074
02	METTAL	125 ml Polyethylene	Ice	1122-96-2074

Weather See -0110

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01568	0 to	0	FID	N/A	ppm	
33-01568	0 to	0	Field HE	N/A		
33-01568	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01568	0 to	0	Field Rad (beta/gam)		cpm	
33-01568	0 to	0	KCB ~~PCB~~		ppm	
33-01568	0 to	0	7/11/96 PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo #16

Roll #11

Comments:

Soil: see -0115

Location: ~15' S of center of 33-20. Under asphalt.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0114

Date July 1, 1996 **Time** 0940 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)--beneath asphalt

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01569	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2074
02	METTAL	125 ml Polyethylene	Ice	1122-96-2074

Weather See -0110

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01569	0 to	0.	FID	N/A	ppm	
33-01569	0 to	0	Field HE	N/A		
33-01569	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01569	0 to	0	Field Rad (beta/gam)		cpm	
33-01569	0 to	0	~~PCB~~ VOAB 7/11/96		ppm	
33-01569	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 13
Roll # 11

Comments:

Soil: Dark brown sand + silt. Abundant ang. gravel. moist, no organic

Location: ~6' off SE corner of 33-20. Below asphalt

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0115

Date July 1, 1996 **Time** 0950 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d) beneath asphalt

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01571	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2074
02	METTAL	125 ml Polyethylene	Ice	1122-96-2074

Weather see -0110

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01571	0 to	0	FID	N/A	ppm	
33-01571	0 to	0	Field HE	N/A		
33-01571	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01571	0 to	0	Field Rad (beta/gam)		cpm	
33-01571	0 to	0	~~PCB~~ KMB 7/1/96		ppm	
33-01571	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 14

Roll # 11

Comments: Dark brown sand + silt w/moderate eng. gravel, moist, no organics

Location: ~30' SW of ~~off~~ SW corner of 33-20. Below asphalt MEE 7/1/96

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0116

Date July 1, 1996 **Time** 1000 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)--beneath asphalt

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01572	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2074
02	METTAL	125 ml Polyethylene	Ice	1122-96-2074

Weather See -0110

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01572	0 to	0	FID	N/A	ppm	
33-01572	0 to	0	Field HE	N/A		
33-01572	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01572	0 to	0	Field Rad (beta/gam)		cpm	
33-01572	0 to	0	~~PCB~~ RCRA 7/1/96		ppm	
33-01572	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #15
Roll #11

Comments:

Soil: See -0115

Location: ~20' S from SW corner of 33-20, under asphalt.

Los Alamos National Laboratory Environmental Restoration Program

2 ME 7/2/96 **SAMPLE COLLECTION LOG FOR SAMPLE ID** 0333-96-0117

Date July ~~1~~, 1996 **Time** ~~0950~~ 0945 ME 7/2/96 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)--beneath asphalt. "Hot spot " sample

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01570		2" 0	7" 0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	ISOU	125 ml Polyethylene	None	1122-96-2076

Weather see 0120

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01570	0 to	0	FID	N/A	ppm	
33-01570	0 to	0	Field HE	N/A		
33-01570	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01570	0 to	0	Field Rad (beta/gam)	165	cpm	Na/2 = 14,240 cpm
33-01570	0 to	0	PID	N/A	ppm	
33-01570	0 to	0	XRF	N/A	ppm	

^3H = ND

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 21 + #22

Roll # 11

Comments: Soil/Tuff interface @ 3". collected sample from 2-7". sample description same as 0120

Location: see -0110

Los Alamos National Laboratory Environmental Restoration Program

2 NE 7/2/96 SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0120

Date July 1, 1996 Time 0920 Sample Type Soil - Subsurface

Technical Area 33 Operable Unit 1122 Sample Location 33-011(d)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) ~~Linda Fluk~~ NE 7/2/96

Composite Type: None Signature [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01566		8" 0	12" 0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2076
02	METTAL	125 ml Polyethylene	Ice	1122-96-2076

Weather scattered clouds, ~70°F, light breeze from east (0-5 mph)

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01566	0 to	0	FID	N/A	ppm	
33-01566	0 to	0	Field HE	N/A		
33-01566	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01566	0 to	0	Field Rad (beta/gam)	228	cpm	b/g = 180 cpm
33-01566	0 to	0	PCB	N/A	ppm	NaI$_2$ = 11,170 cpm
33-01566	0 to	0	PID	N/A	ppm	

^3H = ND

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 18

Roll # 11

Comments:

Sample: soil / Tuff interface @ 10" below asphalt. collected sample from 8" - 12". Powdery, light gray tuff, minor ang. gravel. moderate phenocrysts. soil is dark brown sand + silt. moist. no organics

Location: see -0111

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0121

Date July ~~1~~ 2, 1996 NE 7/2/96 Time 0930 Sample Type Soil - Subsurface

Technical Area 33 Operable Unit 1122 Sample Location 33-011(d)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) ~~Linda Fluk~~ NE 7/2/96

Composite Type: None Signature Mark Lovett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01567		8" 0	12" 0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2076
02	METTAL	125 ml Polyethylene	Ice	1122-96-2076

Weather See 0120

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01567	0 to	0	FID	N/A	ppm	
33-01567	0 to	0	Field HE	N/A		
33-01567	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01567	0 to	0	Field Rad (beta/gam)	216	cpm	NaI_2 = 11,650 cpm
33-01567	0 to	0	PID	N/A	ppm	
33-01567	0 to	0	XRF	N/A	ppm	

^3H = ND

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 19

Roll # 11

Comments:

Sample: Soil/tuff interface @ 10". collected sample from 8-12".
description same as -0120

Location: See -0112

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0122

Date ~~July 1~~ 2 NE 7/2/96, 1996 Time 1005 Sample Type Soil - Subsurface

Technical Area 33 Operable Unit 1122 Sample Location 33-011(d)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) ~~Linda Fluk~~ NE 7/2/96

Composite Type: None Signature [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01568		8" 0	12" 0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2076
02	METTAL	125 ml Polyethylene	Ice	1122-96-2076

Weather See 0120

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01568	0 to	0	FID	N/A	ppm	
33-01568	0 to	0	Field HE	N/A		
33-01568	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01568	0 to	0	Field Rad (beta/gam)	290	cpm	Na/2 = 11,950 cpm
33-01568	0 to	0	PID	N/A	ppm	
33-01568	0 to	0	XRF	N/A	ppm	

^3H = ND

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 23

Roll # 11

Comments:

Sample: soil/Tuff interface ~~8"~~ 10" NE 7/2/96 below asphalt. collected sample from 8-12". Powdery gray tuff. Abundant org. + tuff gravel in sample. very moist. no organics.

Location: see -0113

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0123

Date July ~~1~~ 2, 1996 7/2/96 Time 0940 Sample Type Soil - Subsurface

Technical Area 33 Operable Unit 1122 Sample Location 33-011(d)

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) ~~Linda Fluk~~ NE 7/2/96

Composite Type: None Signature Mark Watt

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01569		5" 0	8" 0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2076
02	METTAL	125 ml Polyethylene	Ice	1122-96-2076

Weather See -0120

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01569	0 to	0	FID	N/A	ppm	
33-01569	0 to	0	Field HE	N/A		
33-01569	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01569	0 to	0	Field Rad (beta/gam)	278	cpm	NaI_2 11,910 cpm
33-01569	0 to	0	PID	N/A	ppm	
33-01569	0 to	0	XRF	N/A	ppm	

^3H = ND

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 20
Roll # 11

Comments: Sample: Soil/Tuff interface @ 6". collected sample from 5-8". sample description see 0120.

Location: See -0114

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0124

Date July ~~1~~ 2, 1996 NE 7/2/96 **Time** 1025 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ NE 7/2/96

Composite Type: None **Signature** Mark Lowell

Grabs:

	Location ID	Stake ID	Start	Depth	End	Depth	Units	Vol	Units	Comments
1	33-01571		6"	0	9"	0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Contalner	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2076
02	METTAL	125 ml Polyethylene	Ice	1122-96-2076

Weather see -0120

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01571	0 to	0	FID	N/A	ppm	
33-01571	0 to	0	Field HE	N/A		
33-01571	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01571	0 to	0	Field Rad (beta/gam)	268	cpm	12,500 cpm NaI_2
33-01571	0 to	0	PID	N/A	ppm	
33-01571	0 to	0	XRF	N/A	ppm	

^3H = ND

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 25

Roll # 11

Comments: Sample: Soil/tuff @ 7". Sampled from 6-9". very moist. light gray powdery tuff. some tuff + eng. gravel, moderate phenocrysts

Location: see -0115

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0125

Date July ~~1~~ 2 MB 7/2/96, 1996 **Time** 1010 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-011(d)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ MB 7/2/96

Composite Type: None **Signature** Mark Bright

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01572		6" 0	8" 0		0		

These Samples were collected using LANL ER SOP 06.10

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2076
02	METTAL	125 ml Polyethylene	Ice	1122-96-2076

Weather See -0120

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01572	0 to	0	FID	N/A	ppm	
33-01572	0 to	0	Field HE	N/A		
33-01572	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01572	0 to	0	Field Rad (beta/gam)	273	cpm	NaI_2 = 12,432 cpm
33-01572	0 to	0	PID	N/A	ppm	
33-01572	0 to	0	XRF	N/A	ppm	

^3H = ND

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 24
Roll # 11

Comments: net refusal @ 8". Collected soil from 6-8". Dark brown sand + silt w/ abundant avg. gravel. Very moist. No organics

Location: see -0116

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2071

Date July 8, 1996 **Time** 1030 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** C-33-001, Main Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01759	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See -2070

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01759	0 to	0	FID	N/A	ppm	
33-01759	0 to	0	Field HE			
33-01759	0 to	0	Field Rad (alpha)		cpm	N/A = 9740 cpm
33-01759	0 to	0	Field Rad (beta/gam)		cpm	
33-01759	0 to	0	PID		ppm	
33-01759	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #29

Roll # 11

Comments:

Sample: Dark brown soil w/chunks of asphalt + eng. gravel.

Location east of 33-124 in crack in asphalt. location is ~3' east of location -1752

PCB screening: 4.1 - 15 ppm

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2072

Date July 8, 1996 **Time** 1040 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** C-33-001, Main Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01760	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See 2070

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01760	0 to	0	FID	N/A	ppm	
33-01760	0 to	0	Field HE			
33-01760	0 to	0	Field Rad (alpha)		cpm	N/A = 9850 cpm
33-01760	0 to	0	Field Rad (beta/gam)		cpm	
33-01760	0 to	0	PID		ppm	
33-01760	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 30

Roll # 11

Comments:

Sample: Loamy sand w/ moderate eng. gravel, high organic content. slightly moist. Light brown.

Location: 5' north of location -1749. north of asphalt sidewalk & north of 33-124. Some grass in area. At base of 6' high slope.

PCB screening 0.5 - 1.0 ppm

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2073

Date July 8, 1996 **Time** 1045 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** C-33-001, Main Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01761	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather see -2070

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01761	0 to	0	FID	NA	ppm	
33-01761	0 to	0	Field HE			
33-01761	0 to	0	Field Rad (alpha)		cpm	
33-01761	0 to	0	Field Rad (beta/gam)		cpm	NA = 19250 cpm
33-01761	0 to	0	PID		ppm	
33-01761	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #31

Roll #11

Comments:

Sample: light brown loamy sand. Slightly moist. moderate avg. gravel, High organic content.

Location: 3' north of location -1751. north of 33-124 + asphalt sidewalk. Some grass in area. At base of ~6' slope.

PCB screening: 1.1 - 4.0

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2047

Date ~~June 28,~~ 1996 NS 7/8/96 **Time** ~~0920~~ 1125 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** ~~C-33-001~~, East Site PCB Screening C-33-002

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01753	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather Partly cloudy low 70's no wind

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01753	0 to	0	FID	N/A	ppm	
33-01753	0 to	0	Field HE			
33-01753	0 to	0	Field Rad (alpha)		cpm	
33-01753	0 to	0	Field Rad (beta/gam)		cpm	Na_2 = 10,190 cpm
33-01753	0 to	0	PID		ppm	
33-01753	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 1

Roll #11

Comments:

Sample: Dark brown sand + soil, moist

PCB Screening: 0.5 – 1.0 ppm

Location: on concrete pad next to (north side) 33-95 "Transfer not Vault"

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2050

Date ~~June 28,~~ 7/8 1996 Time ~~0425~~ 1029

Technical Area 33 Operable Unit 1122 7/8/96

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Sample Type Soil

Sample Location ~~C-33-001,~~ C-33-002 East Site PCB Screening

Name (Print) Mark Everett

Signature Mark Everett

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01756	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See -2047

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01756	0 to	0	FID		ppm	
33-01756	0 to	0	Field HE			
33-01756	0 to	0	Field Rad (alpha)		cpm	
33-01756	0 to	0	Field Rad (beta/gam)		cpm	11,030 cpm
33-01756	0 to	0	PID		ppm	
33-01756	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #4

Roll #11

Comments:

Sample : same as -2047

PCB Screening: 4.1-15 ppm

Location: Just off concrete pad, adjacent to 33-95

Los Alamos National Laboratory Environmental Restoration Program

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2051

Date ~~June 28~~ 1996 MZ 7/8/96 | Time ~~0430~~ 1120 MZ 7/8/96 | Sample Type Soil

Technical Area 33 | Operable Unit 1122 | Sample Location ~~C-33-001~~, East Site PCB Screening C-33-002

QA/QC Type None

Composite: ○ Yes ◉ No | Name (Print) Mark Everett

Composite Type: None | Signature Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01757	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See -2047

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01757	0 to	0	FID		ppm	
33-01757	0 to	0	Field HE			
33-01757	0 to	0	Field Rad (alpha)		cpm	
33-01757	0 to	0	Field Rad (beta/gam)		cpm	Na/2 = 11,470 cpm
33-01757	0 to	0	PID		ppm	
33-01757	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #5

Roll #11

Comments:

Sample: Same as -2047

PCB Screening: 4.1-15ppm.

Location: Same as -2050

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2049

Date ~~June 28, 1996~~ 7/8/96 MS 7/8/96 Time ~~0925~~ 1128 Sample Type Soil

Technical Area 33 Operable Unit 1122 Sample Location ~~C-33-001,~~ East Site PCB Screening C-33-002

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Mark Everett

Composite Type: None Signature [signature]

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01755	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See -2047

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01755	0 to	0	FID	N/A	ppm	
33-01755	0 to	0	Field HE			
33-01755	0 to	0	Field Rad (alpha)		cpm	
33-01755	0 to	0	Field Rad (beta/gam)		cpm	val2 = 10,610 cpm
33-01755	0 to	0	PID		ppm	
33-01755	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #3

Roll #11

Comments:

Sample: Same as -2047

PCB Screening: 4.1-15 ppm

Location: Same as -2047

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2048

Date June 28, 1996 **Time** 0922 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** ~~C-33-001~~, East Site PCB Screening C-33-002

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01754	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See -2047

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01754	0 to	0	FID	N/A	ppm	
33-01754	0 to	0	Field HE			
33-01754	0 to	0	Field Rad (alpha)		cpm	
33-01754	0 to	0	Field Rad (beta/gam)		cpm	
33-01754	0 to	0	PID		ppm	
33-01754	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 2

Roll # 11

Comments:

Sample: Dark brown soil/sand, moist

PCB Screening: < 0.5 ppm

Location: See -2047 NE 6/28/96

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2074

Date July 8, 1996 **Time** 1130 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** C-33-002, East Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01762	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See -2070

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01762	0 to	0	FID	N/A	ppm	
33-01762	0 to	0	Field HE			
33-01762	0 to	0	Field Rad (alpha)		cpm	
33-01762	0 to	0	Field Rad (beta/gam)		cpm	- HA = 18,500 cpm
33-01762	0 to	0	PID		ppm	
33-01762	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 32. (incorrect write down) #33

Roll #11

Comments:

Sample: dark brown sand + small gravel. Minor organics. Slightly moist.

Location: north of 33-95 (Transformer vault). 2' north of location #1756. Location is just off concrete pad amongst some grass + eng. gravel

PCB screening: 1.1 - 4.0 ppm

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2075

Date July 8, 1996 **Time** 1135 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** C-33-002, East Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01763	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C'of C Control No.

Weather See 2070

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01763	0 to	0	FID	N/A	ppm	
33-01763	0 to	0	Field HE			
33-01763	0 to	0	Field Rad (alpha)		cpm	
33-01763	0 to	0	Field Rad (beta/gam)		cpm	N/A = 10,640 cpm
33-01763	0 to	0	PID		ppm	
33-01763	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 34

Roll #11

Comments:

Sample: Same as 2074

Location: 2' north of location #1757. off of concrete pad, north of 33-95. ~3' south of road. Grass + gravel around location

PCB screening < 0.5 ppm

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2076

Date July 8, 1996 **Time** 11 40 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** C-33-002, East Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01764		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See 2070

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01764	0 to	0	FID	N/A	ppm	
33-01764	0 to	0	Field HE	↓		
33-01764	0 to	0	Field Rad (alpha)	↓	cpm	
33-01764	0 to	0	Field Rad (beta/gam)	↓	cpm	- N/A = 10,440 cpm
33-01764	0 to	0	PID	↓	ppm	
33-01764	0 to	0	XRF	↓	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 35

Roll # 11

Comments: Sample. Dark brown loamy sand. Moderate organics, slightly moist. Minor gravel.

PCB screening 1.1 - 4.0 ppm

Location 6' north of the concrete pad of 33-95. located in minor drainage running along road. Grass + gravel around location. ~ 6' south of road. ~ 12' east of location #1757.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2077

Date July 8, 1996 **Time** 1145 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** C-33-002, East Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01765	Surface	0	6"	0	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See 2070

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01765	0 to	0	FID	N/A	ppm	
33-01765	0 to	0	Field HE			
33-01765	0 to	0	Field Rad (alpha)		cpm	
33-01765	0 to	0	Field Rad (beta/gam)		cpm	N/A 11,120 cpm
33-01765	0 to	0	PID		ppm	
33-01765	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #36
Roll #11

Comments:

Sample; Same as 2076

PCB screening 1.1 - 4.0 ppm

Location: 2' east of location 1764. Located in minor drainage along road. ~6' south of road. Grass + gravel in location area.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0587

Date July 11, 1996 **Time** 1015 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-006(a) HE resampling

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01304		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP			1122-96-2080

Weather See 0585

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01304	0 to	6	FID		ppm	
33-01304	0 to	6	Field HE			
33-01304	0 to	6	Field Rad (alpha)		cpm	
33-01304	0 to	6	Field Rad (beta/gam)		cpm	NaI = 16,060 cpm
33-01304	0 to	6	PID		ppm	
33-01304	0 to	6	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #3

Roll #12

Comments:

Sample: Dark brown sand + soil w/ abundant tuff gravel, moist. Abundant organics (stems, roots).

Location: west of road to 33-173. on top of low hill in a juniper tree. Look for blue flagging on juniper + location ID on short lath.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0586

Date July 11, 1996 **Time** 1000 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-006(a) HE resampling

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01402		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP			1122-96-2080

Weather see 0585

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01402	0 to	6	FID		ppm	
33-01402	0 to	6	Field HE			
33-01402	0 to	6	Field Rad (alpha)		cpm	
33-01402	0 to	6	Field Rad (beta/gam)		cpm	15,820 cpm on rad I
33-01402	0 to	6	PID		ppm	
33-01402	0 to	6	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #1

Roll #12

Comments:

Sample Dark brown sand + silt. minor organics. moist moderate tuff gravel.

Location: Approx 30' south of trailer 33-173 on top of low hill. Some brush and grass around. There is a telephone pole + several antenna around. Look for this location ID on short lath.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0585

Date July 11, 1996 **Time** ~~1000~~ 1010 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 VE 7/11/96 **Sample Location** 33-006(a) HE re-sampling

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01360		0	6	In.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP			1122-96-2080

Weather Clear, 75°F, calm

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01360	0 to	6	FID		ppm	
33-01360	0 to	6	Field HE			
33-01360	0 to	6	Field Rad (alpha)		cpm	
33-01360	0 to	6	Field Rad (beta/gam)		cpm	NaI = 16,130 cpm
33-01360	0 to	6	PID		ppm	
33-01360	0 to	6	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #2

Roll # 12

Comments:

Sample: Dark brown sand + silt, moderate tuff gravel, moist, minor organics.

Location: East of 33-173 in minor drainage. Just east of 15' Piñon tree + upstream from hay bail barrier. Abundant bushes + grass. Look for this location ID on short lath.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0588

Date July 11, 1996 **Time** 1020 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-006(a) HE resampling

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01448		0	6	in.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP			1122-96-2080

Weather see 0585

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01448	0 to	6	FID		ppm	
33-01448	0 to	6	Field HE			
33-01448	0 to	6	Field Rad (alpha)		cpm	
33-01448	0 to	6	Field Rad (beta/gam)		cpm	bkgd = 17,430 cpm
33-01448	0 to	6	PID		ppm	
33-01448	0 to	6	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 4

Roll #12

Comments:

Sample: very dark brown sand. Minor organics, very moist, moderate to lt gravel.

Location: on road side, north of MDA-E. Some grass & brush in area. Look for location ID on short lath.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0589

Date July 11, 1996 Time 1035 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-006(a) HE resampling

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Mark Everett

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01312		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP			1122-96-2080

Weather See 0585

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01312	0 to	6	FID		ppm	
33-01312	0 to	6	Field HE			
33-01312	0 to	6	Field Rad (alpha)		cpm	
33-01312	0 to	6	Field Rad (beta/gam)		cpm	No 1 = 20,400 cpm
33-01312	0 to	6	PID		ppm	
33-01312	0 to	6	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 5

Roll #12

Comments:

Sample: Dark brown sand. Very moist. Very minor organics.

Location: at mouth of culvert draining area around 33-26

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0590

Date July 11, 1996 **Time** 1040 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-006(a) HE resampling

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01365		0	6		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP			1122-96-2080

Weather See 0585

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01365	0 to	6	FID		ppm	
33-01365	0 to	6	Field HE			
33-01365	0 to	6	Field Rad (alpha)		cpm	
33-01365	0 to	6	Field Rad (beta/gam)		cpm	val = 19,340 cpm
33-01365	0 to	6	PID		ppm	
33-01365	0 to	6	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #6

Roll #12

Comments:

Sample: See -0589

Location Down the drainage from sample # 0589. in drainage trench. Abundant brush around sample area.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0591

Date July 11, 1996 **Time** 1055 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-006(a) HE resampling

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Mark Everett

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01351		0	6	In,	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP			1122-96-2080

Weather See 0585

Sample Description See Below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01351	0 to	6	FID		ppm	
33-01351	0 to	6.	Field HE			
33-01351	0 to	6	Field Rad (alpha)		cpm	
33-01351	0 to	6	Field Rad (beta/gam)		cpm	val = 27,000 cpm
33-01351	0 to	6	PID		ppm	
33-01351	0 to	6	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 7

Roll #12

Comments:

Sample: Loamy brown soil. Sand + silt size grains. Moderate tuff gravel. Moist.

Location: on steep slope south of south site, soil is between the abundant tuff boulders + in situ tuff, under a juniper tree. Look for pink flagging in tree + this location ID on short lath.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0592

Date July 11, 1996 Time 1110 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-006(a) HE resampling

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Mark Everett

Composite Type: None Signature Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01352		0	6	in.	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP			1122-96-2080

Weather See 0585

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01352	0 to	6	FID		ppm	
33-01352	0 to	6	Field HE			
33-01352	0 to	6	Field Rad (alpha)		cpm	
33-01352	0 to	6	Field Rad (beta/gam)		cpm	val 22,300 cpm
33-01352	0 to	6	PID		ppm	
33-01352	0 to	6	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 8

Roll #12

Comments:

Sample: Brown loamy soil. Primarily silt size grains w/ minor tuff gravel. moist

Location: next to dead tree on steep slope, abundant tuff boulders in area. Look for pink flagging on tree + this location ID on short lath.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0570

Date July 12, 1996 **Time** 1020 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
~~1 33-01580~~ 33-1557		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Hot - 88°F. Breezy from S - 0-5mph. Clear

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01580	0 to	6 in	FID		ppm	
33-01580	0 to	6 in	Field HE			
33-01580	0 to	6 in	Field Rad (alpha)		cpm	
33-01580	0 to	6 in	Field Rad (beta/gam)		cpm	12,310 NaI2
33-01580	0 to	6 in	PID		ppm	
33-01580	0 to	6 in	XRF		ppm	

KCB 7/23/96 33-1557

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 12, Photo #9

As - 37 ppm

Ba - 310 ppm

Comments:

Sample: Coarse to medium sands, minor organics. Abundant eng fill gravels. Slightly moist. Dark brown

Location: ON asphalt parking area, adjacent to fence some mullein, grass

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0571

Date July 12, 1996 **Time** 1030 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01581		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01581	0 to	6 in	FID		ppm	
33-01581	0 to	6 in	Field HE			
33-01581	0 to	6 in	Field Rad (alpha)		cpm	
33-01581	0 to	6 in	Field Rad (beta/gam)		cpm	14,120 NaI2
33-01581	0 to	6 in	PID		ppm	
33-01581	0 to	6 in	XRF		ppm	

33-1556 (1556)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo 10, Roll 12

Ba - 130 ppm
Pb - 17 ppm
Mo - 12 ppm
ZR - 81.8 ppm

Comments:

Sample: Fine to medium sands w/ intermixed gravels and moderate organics (roots, grasses) slightly moist. Medium to dark brown.

Location

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0572

Date July 12, 1996 **Time** 1035 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01582		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01582	0 to	6 in	FID	N/A	ppm	
33-01582	0 to	6 in	Field HE	N/A		
33-01582	0 to	6 in	Field Rad (alpha)	N/A	cpm	
33-01582	0 to	6 in	Field Rad (beta/gam)		cpm	14180 Na12
33-01582	0 to	6 in	PID	N/A	ppm	
33-01582	0 to	6 in	XRF	Below	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants): 33-1555

Photo # 11
Roll 12

CR Lo - 129 ppm Ba - 429
MN - 820 ppm Th - 15.8
Ni - 120ppm Sr - 185
Se - 27 Rb - 61
ZR - 107
Pb - 35

Comments:

Sample: Mostly course sands and intermixed eng. fill gravels. Moderate organics (grass, decayed plant matter) soil is dark brown. Very dry.

Location: On East and North end of SWMU. Much grass, chamisa, wild flowers.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0573

Date July 12, 1996 **Time** 1045 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01583		0	6	in	0		

33 1560

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01583	0 to	6 in	FID		ppm	
33-01583	0 to	6 in	Field HE			
33-01583	0 to	6 in	Field Rad (alpha)		cpm	
33-01583	0 to	6 in	Field Rad (beta/gam)		cpm	15,100 NaI2
33-01583	0 to	6 in	PID		ppm	
33-01583	0 to	6 in	XRF		ppm	

33-1560

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 12
Roll 12

Cr lo- 482 ppm
As - 65 ppm
Sr - 20 ppm
Ba - 112 ppm.

Comments:

Sample: Mostly medium to course sands with intermixed eng. fill gravels. Semi-moist. Medium to light brown color. Minor organics - some roots.

Location: On West end of SWMU approx. 40 feet E. of bldg. 86.

0333-96-0574

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-~~1006~~ 0574 KAB 7/23/96

Date July 12, 1996 **Time** 1050 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013 grid sampling

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
~~1 33-01583~~	33-1559	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2070
02	TU	125 ml Polyethylene	None	1122-96-2070

Weather Same as 0333-96-0570

Sample Description Same as 0333-96-0574

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
~~33-01583~~	0 to	0	FID		ppm	
~~33-01583~~	0 to	0	Field HE			
~~33-01583~~	0 to	0	Field Rad (alpha)		cpm	
~~33-01583~~	0 to	0	Field Rad (beta/gam)		cpm	13,480 Na/2
~~33-01583~~	0 to	0	PID		ppm	
~~33-01583~~	0 to	0	XRF		ppm	

33-1559

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 13 (Wrong Sample # & Site ID # on white board)
Roll # 12

Cr lo- 401 ppm Ba - 105 ppm
Mn - 540
As - 25 ppm
Sr - 21 ppm
Pb - 21 ppm

Comments:

Sample: Coarse to medium sands with abundant intermixed eng. fill gravels. Semi-moist. Dark brown color
Minor organics (some roots)

Location: On asphalt 15 ft. West of Fence mullein, grass nearby

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0574/5

Date July 12, 1996 Time 1055 Sample Type Soil - Surface

Technical Area 33 Operable Unit 1122 Sample Location 33-013

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Kristi Beguin

Composite Type: None Signature

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01584		0	6	in	0		

33-1558

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01584	0 to	6 in	FID		ppm	
33-01584	0 to	6 in	Field HE			
33-01584	0 to	6 in	Field Rad (alpha)		cpm	
33-01584	0 to	6 in	Field Rad (beta/gam)		cpm	14,600 NaI 2
33-01584	0 to	6 in	PID		ppm	
33-01584	0 to	6 in	XRF		ppm	

33-1558

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 15
Roll #12

CR 10 - 400 ppm Ba - 126.6
Mn - 500 ppm
Cu - 53 ppm
As - 22
ZR - 79

Comments:

Sample: Coarse sands and abundant intermixed eng. fill gravels semi-moist, dark brown. Minor organics

Location 12 ft. East of fence on asphalt.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0575/6

Date July 12, 1996 **Time** 1100 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
~~1 33-01655~~ 33-1563		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01655	0 to	6 in	FID		ppm	
33-01655	0 to	6 in	Field HE			
33-01655	0 to	6 in	Field Rad (alpha)		cpm	
33-01655	0 to	6 in	Field Rad (beta/gam)		cpm	17,140 NaI2
33-01655	0 to	6 in	PID		ppm	
33-01655	0 to	6 in	XRF		ppm	

33-1563

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 16
Roll# 12

Cr lo- 216 ppm
As - 68
Se - 26
Zr - 157

Ba - 243 ppm
U - 33 ppm
Th - 26.9 ppm

Comments:

Sample: Fine to medium sands with intermixed eng. fill gravels, slightly moist, light to medium brown. Minor roots.

Location on West end of SWMU approx 25 feet from bldg. 86 grass nearby.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-057~~6~~ 7

Date July 12, 1996 **Time** 1105 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01656		0	6	in	0		

33-1562

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01656	0 to	6 in	FID		ppm	
33-01656	0 to	6 in	Field HE			
33-01656	0 to	6 in	Field Rad (alpha)		cpm	
33-01656	0 to	6 in	Field Rad (beta/gam)		cpm	17,500 Na12
33-01656	0 to	6 in	PID		ppm	
33-01656	0 to	6 in	XRF		ppm	

33-1562

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 17
Roll # 12

CR Hi - 530 ppm
CR Lo - 133 ppm
SR - 131 ppm
ZR - 172 ppm
Rb - 53
Sn - 264
Sb - 66
Ba - 437
U - 43
Th - 22.4

Comments:

Sample: Mostly coarse to medium sands and intermixed engineering fill gravels. Slightly moist. Dark brown. Minor organics.

Location: On asphalt halfway between fence & bldg 86. Some wildflowers poking thru the asphalt.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0577 8

Date July 12, 1996 **Time** 1115 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi Beguin

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
~~1 33-01657~~ 33-1561		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01657	0 to	6 in	FID		ppm	
33-01657	0 to	6 in	Field HE			
33-01657	0 to	6 in	Field Rad (alpha)		cpm	
33-01657	0 to	6 in	Field Rad (beta/gam)		cpm	15,430 Na I 2
33-01657	0 to	6 in	PID		ppm	
33-01657	0 to	6 in	XRF		ppm	

MB 7/12/96

33-1561

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 18

Roll# 12

CR lo - 390 ppm Rb - 26
Cu - 78 ppm SN - 33
ZN - 258 ppm Ba - 161
As - 37 Th - 14.7
SR - 57.3
ZR - 97.1

Comments:

Sample: Coarse sands and intermixed loam and abundant eng. fill gravels. Abundant organics (Roots, leaves)

Sample location: 4 feet West of fence, off asphalt pad.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0579

Date July 12, 1996 **Time** 1130 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
~~1 33-01658~~ 33-1090		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01658	0 to	6 in	FID		ppm	
33-01658	0 to	6 in	Field HE			
33-01658	0 to	6 in	Field Rad (alpha)		cpm	
33-01658	0 to	6 in	Field Rad (beta/gam)		cpm	16,100 Na/2
33-01658	0 to	6 in	PID		ppm	
33-01658	0 to	6 in	XRF		ppm	

33-1090

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 19
Roll # 12

Cr lo - 700ppm Ba-146
As - 42
Sr - 34
Zr - 71

Comments:

Sample: Coarse to medium sands with abundant intermixed gravels. Minor organics. Slightly moist, medium brown.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0~~579~~-80

Date July 12, 1996 **Time** 1135 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1 ~~33-01659~~ 33-1090	KCB 7/23/96	0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description Same as 0333-96-0579

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01659	0 to	6 in	FID		ppm	
33-01659	0 to	6 in	Field HE			
33-01659	0 to	6 in	Field Rad (alpha)		cpm	
33-01659	0 to	6 in	Field Rad (beta/gam)		cpm	15,360 Na/2
33-01659	0 to	6 in	PID		ppm	
33-01659 33-1090 KCB 7/23/96	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 19
Roll 12

Comments:

6-12" sample

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-058~~0~~1

Date July 12, 1996 **Time** 1140 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A. Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01660		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C.of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather Same as 0333-96-0570

Sample Description

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01660	0 to	6 in	FID		ppm	
33-01660	0 to	6 in	Field HE			
33-01660	0 to	6 in	Field Rad (alpha)		cpm	
33-01660	0 to	6 in	Field Rad (beta/gam)		cpm	15500 Na12
33-01660	0 to	6 in	PID		ppm	
33-01660	0 to	6 in	XRF		ppm	

33-1092

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 21
Roll 12

Comments:

Sample - Coarse sands and abundant intermixed eng. fill gravels. Dark brown. Slightly moist. Minor organics - roots.

location: former location 33-1092

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0581/2

Date July 12, 1996 **Time** 1145 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** Kristi A Beguin

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01661		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather 0333-96-0570

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01661	0 to	6 in	FID		ppm	
33-01661	0 to	6 in	Field HE			
33-01661	0 to	6 in	Field Rad (alpha)		cpm	
33-01661	0 to	6 in	Field Rad (beta/gam)		cpm	14,800 Na/2
33-01661	0 to	6 in	PID		ppm	
33-01661	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 22
Roll 12

Comments:

Sample: Course sands and abundant intermixed gravels minor to moderate organics dry. light to medium brown

Cr lo - 130
Co - 290
Cu - 96
Sr - 216
Zr - 109
Pb - 36
Rb - 81
Sn - 181
Sb - 55
Ba - 619

Alfalfa, wildflowers & grasses nearby.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-1006

Date July 23, 1996 **Time** 1050 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013 grid sampling

QA/QC Type Field Duplicate

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	~~33-01583~~ 33-1559		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2082
02	TU	125 ml Polyethylene	None	1122-96-2082

Weather Same as 0333-96-0570

Sample Description Same as 0333-96-0574

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01583	0 to	0	FID		ppm	
33-01583	0 to	0	Field HE			
33-01583	0 to	0	Field Rad (alpha)		cpm	
33-01583	0 to	0	Field Rad (beta/gam)		cpm	13,480 NaI2
33-01583	0 to	0	PID		ppm	
33-01583	0 to	0	XRF		ppm	

33-1559

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo# 13 (WRONG Sample ID & Site ID on White board)
Roll # 12

Cr lo - 401 ppm
Mo - 540 ppm
As - 25 ppm
Sr - 21 ppm
Pb - 21 ppm
Ba - 105 ppm

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0582~~2~~3

Date July 12, 1996 **Time** **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01662		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01662	0 to	6 in	FID		ppm	
33-01662	0 to	6 in	Field HE			
33-01662	0 to	6 in	Field Rad (alpha)		cpm	
33-01662	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01662	0 to	6 in	PID		ppm	
33-01662	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0584

Date July 12, 1996 **Time** **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01663		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01663	0 to	6 in	FID		ppm	
33-01663	0 to	6 in	Field HE			
33-01663	0 to	6 in	Field Rad (alpha)		cpm	
33-01663	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01663	0 to	6 in	PID		ppm	
33-01663	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0584

Date July 12, 1996 **Time** **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-013

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kristi Beguin

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01664		0	6	in	0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-96-2079
02	TU	125 ml Polyethylene	None	1122-96-2079

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01664	0 to	6 in	FID		ppm	
33-01664	0 to	6 in	Field HE			
33-01664	0 to	6 in	Field Rad (alpha)		cpm	
33-01664	0 to	6 in	Field Rad (beta/gam)		cpm	
33-01664	0 to	6 in	PID		ppm	
33-01664	0 to	6 in	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

For Site 1033-1091

Cr lo - 184
Ba - 309
U - 18
Th - 37.1

1092

Cr lo - 180
As - 37
Rb - 41.
Cd - 84
Sn - 142
Sb - 63
Ba - 441
U - 43
Th - 39

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0594

Date July ~~29~~ 30, 1996 **Time** 1330

Technical Area 33 **Operable Unit** 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Sample Type Soil

Sample Location 33-010(b) Approx. 10 grabs from West Side of ledge that ~~was divided into 2 quadrants.~~ KCCB 7/30/96

Name (Print) Linda Fluk

Signature _____

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1		0	6 ~~0~~		0	inches	

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTCLP	500 ml Polyethylene	Ice	1122-96-2083

Weather Sunny, clear 90°F

Sample Description med brown soil w/ metal shavings

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	FID		ppm	
	0 to 0	Field HE			
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	PID		ppm	
	0 to 0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Sample collected as composit sample - 10 locations composited together to 1 sample. Collected from east quadrant of soil which metal pile was sitting on.
med. brown soil w/ pieces of metal shavings, plastic, cobbles & other debris.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0001

Date August 1, 1995 **Time** 1208 **Sample Type** Liquid

Technical Area 33 **Operable Unit** 1082 **Sample Location** inside sump

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

Location ID	Start Depth	End Depth	Units
1	0	0	

Liquid from top of drums

These Samples were collected using LANL ER SOP 06.15

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	1 L Amber Glass	Ice	1082-95-9014
02	SEMI	1 L Amber Glass	Ice	1082-95-9014
03	TAL METALS	500 ml Polyethylene	HNO3	1082-95-9014
04	VOAGCMS	40 ml Septum Amber Gla	HCl	1082-95-9014
05	VOAGCMS	40 ml Septum Amber Gla	HCl	1082-95-9014

Weather hot ~ 95°F Mostly sunny calm dry

Sample Description Mostly clear liquid from sump

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	CGI	NA	%LEL	
	0 to 0	FID	NA	ppm	
	0 to 0	Field HE	NA		
	0 to 0	Field portable XRF	NA	ppm	
	0 to 0	Field Rad (alpha)	NA	cpm	
	0 to 0	Field Rad (beta/gam)	NA	cpm	
	0 to 0	Oxygen		%	
	0 to 0	PID	1	ppm	(background

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #10? photo #25

Comments:

VOCs taken immediately after opening drum (not composited)

The rest of the samples were composited from the top of all 7 drums. Liquid placed in large container, poured into bottle

Liquid is mostly clear color, very little sediment.

Liquid taken from top of 7 storage drums

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0002

Date August 1, 1995 **Time** 1057 **Sample Type** Sludge (Soil-Like)

Technical Area 16 **Operable Unit** 1082 **Sample Location** Inside drum, from top

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ LF 8/1/95 Russ Abell

Composite Type: None **Signature** Russell H Abell

Grabs:

Location ID	Start Depth	End Depth	Units
1	0	0	

sludge

These Samples were collected using LANL ER SOP 06.19

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	1082-95-9014
02	SEMI	125 ml Glass	Ice	1082-95-9014
03	TAL METALS	125 ml Polyethylene	Ice	1082-95-9014
04	VOAGCMS	125 ml Septum Amber gl	Ice	1082-95-9014

9015

LF 8/1/95

Weather Sunny, clear, slightly humid 85°F

Sample Description saturated sludge see below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	CGI		%LEL	
	0 to 0	FID	N/A	ppm	
	0 to 0	Field HE			
	0 to 0	Field portable XRF		ppm	
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	Oxygen		%	
	0 to 0	PID	10	ppm	down in the sump

15 ppm in the bowl

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 10. Frame 24

Comments:

Sample location: bottom of sump at building 23 near NW corner where VOC readings on PID were encountered during attempted removal on 7/31/95.

Sample description: Saturated sludge intermixed fine sand and silt with minor clay no organics detected heavy oil content assorted trash (plastic, string, hair?) maybe) dark brown and saturated

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0003

Date August 1, 1995 **Time** 1215 **Sample Type** Liquid

Technical Area 16 **Operable Unit** 1082 **Sample Location** inside drum, from bottom

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

Location ID	Start Depth	End Depth	Units
1	0	0	

These Samples were collected using LANL ER SOP 06.15

liquid from bottom of drum

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	1 L Amber Glass	Ice	1082-95-9014
02	SEMI	1 L Amber Glass	Ice	1082-95-9014
03	TAL METALS	500 ml Polyethylene	HNO3	1082-95-9014
04	VOAGCMS	40 ml Septum Amber Gla	HCl	1082-95-9014
05	VOAGCMS	40 ml Septum Amber Gla	HCl	1082-95-9014

Weather Refer to 0333-95-0001

Sample Description mostly clear liquid from sump

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	CGI	NA	%LEL	
	0 to 0	FID		ppm	
	0 to 0	Field HE			
	0 to 0	Field portable XRF		ppm	
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	Oxygen		%	
	0 to 0	PID	1	ppm	(background)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #11?, photos 1, 2, 3

Comments:

Samples collected with Coliwasa sampler. Water collected from bottom of 7 drums. Put into a large container poured into indiv bottles.
VOCs collected immediately from water collected from the bottom of 1 drum (not composited)
Liquid is mostly clear, with little sediment.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2045

Date ~~June 28~~ 7/8, 1996 NE 7/8/96 Time ~~0958~~ 1040 NE 7/8/96 Sample Type Soil

Technical Area 33 Operable Unit 1122 Sample Location ~~C-33-002~~ C-33-001, Main Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Mark Everett

Composite Type: None Signature Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01751	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather see -2047

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01751	0 to	0	FID	N/A	ppm	
33-01751	0 to	0	Field HE			
33-01751	0 to	0	Field Rad (alpha)		cpm	
33-01751	0 to	0	Field Rad (beta/gam)		cpm	bal2: 9,980 cpm
33-01751	0 to	0	PID		ppm	
33-01751	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo #9
Roll #11

Comments:

Sample · Predominately quartz sand. Light brown. moist

PCB Sampling: 1.1-4.0m

Location: ~~east~~ north side of 33-124, ~~east~~ north of asphalt sidewalk, north of -2043 NE 7/8/96 NE 7/8/96

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2043

Date ~~June 28,~~ 7/8 1996 NE 7/8/96 Time ~~0953~~ 1035 Sample Type Soil

Technical Area 33 Operable Unit 1122 NE 7/8/96 Sample Location ~~G 33-002~~ C-33 001, Main Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Mark Everett

Composite Type: None Signature Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01749	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See - 2047

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01749	0 to	0	FID	N/A	ppm	
33-01749	0 to	0	Field HE			
33-01749	0 to	0	Field Rad (alpha)		cpm	
33-01749	0 to	0	Field Rad (beta/gam)		cpm	NaI2 = 9,710 cpm
33-01749	0 to	0	PID		ppm	
33-01749	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 7

Roll #11

Comments:

Sample; Dark brown sand. Moist. minor organics

PCB Screening = 4.1-15 ppm. RETESTED: 1.1-4.0 ppm.

Location: soil adjacent to asphalt sidewalk on ~~west~~ east side of 33-124. NE 6/28/96

Los Alamos National Laboratory Environmental Restoration Program

7/8 NE 7/8/96 **SAMPLE COLLECTION LOG FOR SAMPLE ID** 0333-96-2042

Date ~~June 28,~~ 1996 **Time** ~~0446~~ 1005 NE 7/8/96 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** ~~C-33-002,~~ C 33 001 Main Site PCB Screening 7/8/96

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Name (Print) Mark Everett

Signature Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01748	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control

Weather See -2047

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01748	0 to	0	FID	N/A	ppm	
33-01748	0 to	0	Field HE			
33-01748	0 to	0	Field Rad (alpha)		cpm	
33-01748	0 to	0	Field Rad (beta/gam)		cpm	NaI_2 = 9,720cpm
33-01748	0 to	0	PID		ppm	
33-01748	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo #6

Roll #11

Comments:

Sample: Eng. pebbles and dark brown soil. Moist

Location: South side of 33-124 (transformer substation) in gravel on asphalt

PCB screening: 0.5 - 1.0 ppm

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2045

Date ~~June 28~~ 7/8, 1996 NE 7/8/96 Time ~~0958~~ 1040 NE 7/8/96 Sample Type Soil

Technical Area 33 Operable Unit 1122 Sample Location ~~G-33-002~~ C-33-001, Main Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Mark Everett

Composite Type: None Signature Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01751	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather see -2047

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01751	0 to	0	FID	N/A	ppm	
33-01751	0 to	0	Field HE			
33-01751	0 to	0	Field Rad (alpha)		cpm	
33-01751	0 to	0	Field Rad (beta/gam)		cpm	tal2: 9,980 cpm
33-01751	0 to	0	PID		ppm	
33-01751	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

photo # 9

Roll # 11

Comments:

Sample · Predominately quartz sand. Light brown. moist

PCB Sampling: 1.1-4.0m

Location: ~~east~~ north side of 33-124, ~~east~~ north of asphalt sidewalk, north of -2043 NE 7/8/96 NE 7/8/96

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-2043

Date ~~June 28,~~ 7/8 1996 NE 7/8/96 Time ~~0953~~ 1035 Sample Type Soil

Technical Area 33 Operable Unit 1122 NE 7/8/96 Sample Location ~~C-33-002~~ C-33 001, Main Site PCB Screening

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Mark Everett

Composite Type: None Signature Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01749	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.

Weather See - 2047

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01749	0 to	0	FID	N/A	ppm	
33-01749	0 to	0	Field HE			
33-01749	0 to	0	Field Rad (alpha)		cpm	
33-01749	0 to	0	Field Rad (beta/gam)		cpm	NaI2 = 9,710 cpm
33-01749	0 to	0	PID		ppm	
33-01749	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 7

Roll #11

Comments:

Sample; Dark brown sand. moist. minor organics

PCB Screening = 4.1-15 ppm. RETESTED: 1.1-4.0 ppm.

Location: soil adjacent to asphalt sidewalk on ~~west~~ east side of 33-124.

NE 6/28/96

Los Alamos National Laboratory Environmental Restoration Program

7/8 NE 7/8/96 **SAMPLE COLLECTION LOG FOR SAMPLE ID** 0333-96-2042

Date ~~June 28,~~ 1996 **Time** ~~0446~~ 1005 NE 7/8/96 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** ~~C-33-002,~~ C 33 001 Main Site PCB Screening 7/8/96

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Name (Print) Mark Everett

Signature Mark Everett

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01748	Surface	0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control

Weather See -2047

Sample Description see below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01748	0 to	0	FID	N/A	ppm	
33-01748	0 to	0	Field HE			
33-01748	0 to	0	Field Rad (alpha)		cpm	
33-01748	0 to	0	Field Rad (beta/gam)		cpm	$Na/_2$ = 9,720cpm
33-01748	0 to	0	PID		ppm	
33-01748	0 to	0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Photo # 6

Roll #11

Comments:

Sample: Eng. pebbles and dark brown soil. Moist

Location: South side of 33-124 (transformer substation) in gravel on asphalt

PCB screening: 0.5 - 1.0 ppm

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0595

Date July 30, 1996 **Time** 1045 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-010(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2084
02	METTAL	125 ml Polyethylene	Ice	1122-96-2084

Weather Sunny, Hot ≈80°, Wind 5-10 mph from the South.

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	FID		ppm	
	0 to 0	Field HE			
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	PID		ppm	
	0 to 0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Location: West side of upper Ledge, Composited from 12 different locations.

Sample description: sandy/silt, intermixed with tuff pebbles (white + gray), minor organics, metal shavings, light brown to med. brown

XRF Results:

K	29820	Zr	300
Ca	40470	Mo	14.2
Ti	2280	Pb	84
Mn	660	Rb	125
Fe	23080	Ba	368
Cu	147	Ag	50
Zn	218	U	57
Sr	168	Th	41

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0593

Date July 29, 1996 **Time** 1310 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-010(b) Approx. 10 grabs from Eastside of ledge ~~that was divided into 2 quadrants.~~ KCB 7/30/96

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1		0	.06		0	inches	

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTCLP	500 ml Polyethylene	Ice	1122-96-2083

Weather 90°F, sunny, clear

Sample Description med brown soil w/ metal shavings

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	FID		ppm	
	0 to 0	Field HE			
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	PID		ppm	
	0 to 0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Sample collected as composit sample - 10 locations composited together to 1 sample. Collected from west quadrant of soil which metal pile was sitting on.

Med brown soil w/ pieces of metal shavings, plastic, cobbles & other debris.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0596

Date July 30, 1996 **Time** 1500 **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-010(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Kenny Hansel ~~Linda Fluk~~

Composite Type: None **Signature**

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2084
02	METTAL	125 ml Polyethylene	Ice	1122-96-2084

Weather Sunny, Hot 90°F, 5-10 mph wind from the South

Sample Description See below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	FID		ppm	
	0 to 0	Field HE			
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	PID		ppm	
	0 to 0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Location: East side of upper ledge composited from 12 different location.

Sample description: sandy/silt, intermixed with tuff pebbles & gravels (white & gray), minor organics (sticks, roots), very dry, metal shavings, light brown

XRF Results:

K	29150	Zr	260
Ca	49380	Pb	33
Ti	1680	Rb	96
Cr LO	170	Ba	22.9
Mn	640	Ag	71
Fe	19740	U	37
Zn	101	Th	39
As	41		

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0597

Date July 30, 1996 **Time** **Sample Type** Soil

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-010(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1		0	0		0		

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2084
02	METTAL	125 ml Polyethylene	Ice	1122-96-2084

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	FID		ppm	
	0 to 0	Field HE			
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	PID		ppm	
	0 to 0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

XRF Results:

K	28150	Rb	81
Ca	16020	Sb	32
Ti	1210	Ba	83.1
CrLo	300	Ag	52
Fe	11290	U	88
Zn	153	Th	83
As	87		
Sr	52.1		
Zr	172.9		

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-9012

Date August 1, 1996 **Time** **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1	33-01547		0	0		0		

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	TU	125 ml Polyethylene	None	1122-96-2085
02	METTAL	125 ml Polyethylene	Ice	1122-96-2085

Weather _____

Sample Description _____

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01547	0 to	0	FID		ppm	
33-01547	0 to	0	Field HE			
33-01547	0 to	0	Field Rad (alpha)		cpm	
33-01547	0 to	0	Field Rad (beta/gam)		cpm	
33-01547	0 to	0	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

XRF Results: K 42300, Ca 13920, Ti 680, Mn 730, Fe 10530, Cu 184, Zn 92, Se 23, Zr 245, Pb 47, Rb 104, Cd 74, Ba 88, U 106, Th 85

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-96-0594

Date July ~~29~~ 4 cf 7/30/96, 1996 Time 1330

Technical Area 33 Operable Unit 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

Sample Type Soil

Sample Location 33-010(b) Approx. 10 grabs from West Side of ledge that ~~was divided into 2 quadrants.~~ KCCB 7/30/96

Name (Print) Linda Fluk

Signature

Location ID	Stake ID	Start Depth	End Depth	Units	Vol	Units	Comments
1		0	6 0		0	inches	

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTCLP	500 ml Polyethylene	Ice	1122-96-2083

Weather sunny, clear 90°F

Sample Description med brown soil w/ metal shavings

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	FID		ppm	
	0 to 0	Field HE			
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	PID		ppm	
	0 to 0	XRF		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Comments:

Sample collected as composit sample - 10 locations composited together to 1 Sample. Collected from east quadrant of soil which metal pile was sitting on.
med. brown soil w/ pieces of metal shavings, plastic, cobbles & other debris.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0001

Date August 1, 1995 **Time** 1208 **Sample Type** Liquid

Technical Area 33 **Operable Unit** 1082 **Sample Location** inside sump

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

Location ID	Start Depth	End Depth	Units
1	0	0	

Liquid from top of drums

These Samples were collected using LANL ER SOP 06.15

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	1 L Amber Glass	Ice	1082-95-9014
02	SEMI	1 L Amber Glass	Ice	1082-95-9014
03	TAL METALS	500 ml Polyethylene	HNO3	1082-95-9014
04	VOAGCMS	40 ml Septum Amber Gla	HCl	1082-95-9014
05	VOAGCMS	40 ml Septum Amber Gla	HCl	1082-95-9014

Weather hot ~ 95°F Mostly sunny calm dry

Sample Description mostly clear liquid from sump

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	CGI	NA	%LEL	
	0 to 0	FID	NA	ppm	
	0 to 0	Field HE	NA		
	0 to 0	Field portable XRF	NA	ppm	
	0 to 0	Field Rad (alpha)	NA	cpm	
	0 to 0	Field Rad (beta/gam)	NA	cpm	
	0 to 0	Oxygen		%	
	0 to 0	PID	1	ppm	(background

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #10? photo #25

Comments:

VOCs taken immediately after opening drum (not composited)

The rest of the samples were composited from the top of all 7 drums. Liquid placed in large container, poured into bottle

Liquid is mostly clear color, very little sediment.

Liquid taken from top of 7 storage drums

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0002

Date August 1, 1995 **Time** 1057 **Sample Type** Sludge (Soil-Like)

Technical Area 16 **Operable Unit** 1082 **Sample Location** Inside drum, from top

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** ~~Linda Fluk~~ LF 8/1/95 Russ Abell

Composite Type: None **Signature** Russell H Abell

Grabs:

Location ID	Start Depth	End Depth	Units
1	0	0	

sludge

These Samples were collected using LANL ER SOP 06.19

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	125 ml Glass	Ice	1082-95-9014
02	SEMI	125 ml Glass	Ice	1082-95-9014
03	TAL METALS	125 ml Polyethylene	Ice	1082-95-9014
04	VOAGCMS	125 ml Septum Amber gl	Ice	1082-95-9014

9016

LF 8/1/95

Weather Sunny, clear, slightly humid 85°F

Sample Description saturated sludge see below

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	CGI		%LEL	
	0 to 0	FID	N/A	ppm	
	0 to 0	Field HE			
	0 to 0	Field portable XRF		ppm	
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	Oxygen		%	
	0 to 0	PID	10	ppm	down in the sump

15 ppm in the bowl

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 8 10?. Frame 24

Comments:

Sample location: bottom of sump at building 23 near NW corner where VOC readings on PID were encountered during attempted removal on 7/31/95.

Sample description: Saturated sludge intermixed fine sand and silt with minor clay no organics detected heavy oil content assorted trash (plastic, string, hair?) maybe) dark brown and saturated

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0003

Date August 1, 1995 **Time** 1215 **Sample Type** Liquid

Technical Area 16 **Operable Unit** 1082 **Sample Location** inside drum, from bottom

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

Location ID	Start Depth	End Depth	Units
1	0	0	

These Samples were collected using LANL ER SOP 06.15 liquid from bottom of drum

ID	Analysis	Container	Preservative	C of C Control No.
01	HEXP	1 L Amber Glass	Ice	1082-95-9014
02	SEMI	1 L Amber Glass	Ice	1082-95-9014
03	TAL METALS	500 ml Polyethylene	HNO3	1082-95-9014
04	VOAGCMS	40 ml Septum Amber Gla	HCl	1082-95-9014
05	VOAGCMS	40 ml Septum Amber Gla	HCl	1082-95-9014

Weather Refer to 0333-95-0001

Sample Description mostly clear liquid from sump

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
	0 to 0	CGI	NA	%LEL	
	0 to 0	FID		ppm	
	0 to 0	Field HE			
	0 to 0	Field portable XRF		ppm	
	0 to 0	Field Rad (alpha)		cpm	
	0 to 0	Field Rad (beta/gam)		cpm	
	0 to 0	Oxygen		%	
	0 to 0	PID	1	ppm	(background)

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll #11?, photos 1, 2, 3

Comments:

Samples collected with Coliwasa samples. Waters collected from bottom of 7 drums. Put into a large container poured into indiv bottles.

VOCs collected immediately from water collected from the bottom of 1 drum (not composited)

Liquid is mostly clear, with little sediment.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0100

Date January 3, 1996 **Time** 1545

Technical Area 33 **Operable Unit** 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01635	0	0	

Sample Type Liquid

Sample Location PRS 33-010(e) from1 l cannister B containing liquid

Name (Print) Linda Fluk

Signature _____

These Samples were collected using LANL ER SOP 06.16

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	500 ml Amber glass-B	Ice	1122-95-0011
02	SEMI	500 ml Amber glass-A	Ice	1122-95-0011

Weather Sunny, clear, cool to mild - 42-45°F

Sample Description pure solvent approximately 900 ml

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01635	0 to 0	FID	N/A	ppm	
33-01635	0 to 0	Field HE	N/A		
33-01635	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01635	0 to 0	Field Rad (beta/gam)	N/A	cpm	
33-01635	0 to 0	PID	background	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

No photo

Comments:

location description: The canister of solvent was collected from canyon area at East site during VCA at 33-010(a). Canister punctured at Area 6 by HAZMAT team remote liquid sampling operation. Canister was too small for the HAZMAT team to sample remotely. It was determined by PID monitoring that after ventilation the sample would be collected manually. Swipes for Tritium were taken by Marty Peiffer.

sample description: pure solvent approximately 900 ml in volume within Canister B, no reaction when punctured.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0100

Date 1/3/96 Time 1545

Technical Area 33 Operable Unit 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01635	0	0	

Sample Type Liquid

Sample Location ~~PRS 33-007(b)~~ 33-010(e) from1 l cannister B containing liquid

Name (Print) Linda Fluk

Signature

These Samples were collected using LANL ER SOP 06.16

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	500 ml Amber glass-B	Ice	1122-95-0011
02	SEMI	500 ml Amber glass-A	Ice	1122-95-0011

Weather Sunny, clear, cool to mild - 42-45°F

Sample Description pure solvent approximately 900 ml

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01635	0 to 0	FID	N/A	ppm	
33-01635	0 to 0	Field HE	N/A		
33-01635	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01635	0 to 0	Field Rad (beta/gam)	N/A	cpm	
33-01635	0 to 0	PID	background	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

No photo

Comments:

location description: Sample was sampled from Canyon area of Area 6 at TA-33. Canister punctured by HAZMAT team remote liquid sampling operation. Canister was too small for the HAZMAT team to sample remotely. It was determined by PID monitoring that after ventilation the sample would be collected manually. Swipes for Tritium were taken by Marty Peiffer.

Sample was collected from drainage ~~wit~~ during VCA at 33-010(e)

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0099

Date January 3, 1996 **Time** 1540

Technical Area 33 **Operable Unit** 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01635	0	0	

Sample Type Liquid

Sample Location PRS 33-010(e) from 1 l cannister A containing liquid

Name (Print) Linda Fluk

Signature _____

These Samples were collected using LANL ER SOP 06.16

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	500 ml Amber Glass	Ice	1122-95-0011

Weather Sunny, cool to mild - 42-45°F, dry, clear

Sample Description pure solvent approximately 125 ml

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01635	0 to 0	FID	N/A	ppm	
33-01635	0 to 0	Field HE	N/A		
33-01635	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01635	0 to 0	Field Rad (beta/gam)	N/A	cpm	
33-01635	0 to 0	PID	5	ppm	in canister

Photo (Roll, Frame, Azimuth, Subject, Participants):

No photo

Comments:

location description: The canister of solvent was collected from canyon area at East site during VCA at 33-010(a) from canyon area of Area 6 at TA-33. Canister punctured at Area 6 by HAZMAT team remote liquid sampling operation. Canister was too small for the HAZMAT team to sample remotely. It was determined by PID monitoring that after ventilation the sample would be collected manually. Swipes for Tritium were taken by Marty Peiffer.

sample description: pure solvent approximately 125 ml in volume within Canister A, no reaction when punctured.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0099

Date 1/3/96 Time 1540 Sample Type Liquid

Technical Area 33 Operable Unit 1122 Sample Location PRS ~~33-007(b)~~ 33-010(e) from 1 l cannister A containing liquid

QA/QC Type None

Composite: ○ Yes ◉ No Name (Print) Linda Fluk

Composite Type: None Signature

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01635	0	0	

These Samples were collected using LANL ER SOP 06.16

ID	Analysis	Container	Preservative	C of C Control No.
01	SEMI	500 ml Amber Glass	Ice	1122-95-0011

Weather Sunny, clear, cool to mild - 42-45°F

Sample Description pure solvent approximately 125 ml

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01635	0 to 0	FID	N/A	ppm	
33-01635	0 to 0	Field HE	N/A		
33-01635	0 to 0	Field Rad (alpha)	N/A	cpm	
33-01635	0 to 0	Field Rad (beta/gam)	N/A	cpm	
33-01635	0 to 0	PID	5	ppm	in canister

Photo (Roll, Frame, Azimuth, Subject, Participants):

No photo

Comments:

location description: Sample was sampled from Canyon area of Area 6 at TA-33. Canister punctured by HAZMAT team remote liquid sampling operation. Canister was too small for the HAZMAT team to sample remotely. It was determined by PID monitoring that after ventilation the sample would be collected manually. Swipes for Tritium were taken by Marty Peiffer.

Sample was collected during VCA at 33-010(e) in drainage

PRS	PRS Type	Type	Sample ID	Collect Date	Primary Location	QA/QC	Matrix	Field Screening
33-009	Surface disposal	Surface	0333-96-2000	00/00/00	33-01700		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2001	00/00/00	33-01700		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2002	00/00/00	33-01701		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2003	00/00/00	33-01701		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2004	00/00/00	33-01702		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2005	00/00/00	33-01702		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2006	00/00/00	33-01703		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2007	00/00/00	33-01703		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2008	00/00/00	33-01704		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2009	00/00/00	33-01704		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2010	00/00/00	33-01705		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2011	00/00/00	33-01705		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2012	00/00/00	33-01706		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2013	00/00/00	33-01706		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2014	00/00/00	33-01707		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2015	00/00/00	33-01707		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2016	00/00/00	33-01708		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2017	00/00/00	33-01708		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2018	00/00/00	33-01709		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2019	00/00/00	33-01709		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2020	00/00/00	33-01710		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2021	00/00/00	33-01710		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2022	00/00/00	33-01711		Soil	PCB

PRS	PRS Type	Type	Sample ID	Collect Date	Primary Location	QA/QC	Matrix	Field Screening
33-009	Surface disposal	Subsurface	0333-96-2023	00/00/00	33-01711		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2024	00/00/00	33-01712		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2025	00/00/00	33-01712		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2026	00/00/00	33-01713		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2027	00/00/00	33-01713		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2028	00/00/00	33-01714		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2029	00/00/00	33-01714		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2030	00/00/00	33-01715		Soil	PCB
33-009	Surface disposal	Subsurface	0333-96-2031	00/00/00	33-01715		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2047	00/00/00	33-01716		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2048	00/00/00	33-01717		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2049	00/00/00	33-01718		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2050	00/00/00	33-01719		Soil	PCB
33-009	Surface disposal	Surface	0333-96-2051	00/00/00	33-01720		Soil	PCB
33-013	Storage area(s)	Surface	0333-96-2052	00/00/00	33-01721		Soil	XRF
33-013	Storage area(s)	Surface	0333-96-2053	00/00/00	33-01722		Soil	XRF
33-013	Storage area(s)	Surface	0333-96-2054	00/00/00	33-01723		Soil	XRF
33-013	Storage area(s)	Surface	0333-96-2055	00/00/00	33-01724		Soil	XRF
33-013	Storage area(s)	Surface	0333-96-2056	00/00/00	33-01725		Soil	XRF
33-013	Storage area(s)	Surface	0333-96-2057	00/00/00	33-01726		Soil	XRF
33-013	Storage area(s)	Surface	0333-96-2058	00/00/00	33-01727		Soil	XRF
33-013	Storage area(s)	Surface	0333-96-2059	00/00/00	33-01728		Soil	XRF
33-013	Storage area(s)	Surface	0333-96-2060	00/00/00	33-01729		Soil	XRF

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0080

November 6, 1995 Time 1209 Sample Type Soil - Surface

nical Area 33 Operable Unit 1122 Sample Location

C e None

osite: ◯ Yes ◉ No Name (Print) Linda Fluk

osite Type: None Signature

s:

Location ID	Start Depth	End Depth	Units
33-01411	0	6	

Samples were collected using LANL ER SOP

Analysis	Container	Preservative	C of C Control No.
METTAL	125 ml Polyethylene	Ice	1122-95-0003

er sunny, ~60 degrees F, clear, dry

Description silt/clay intermixed with sand and crushed tuff

Screening

D	Depth		Screening Method	Result	Units	Comments
411	0 to	6	FID	NA	ppm	
411	0 to	6	Field HE	NA		
411	0 to	6	Field Rad (alpha)	NA	cpm	
411	0 to	6	Field Rad (beta/gam)	105	cpm	bkg
411	0 to	6	PID	0-1	ppm	bkg

(Roll, Frame, Azimuth, Subject, Participants):

9

ents:

ample location is the same as AAA 9767, collected in 1994.

description: silt/clay intermixed with sand and crushed tuff, some organic materials (roots), med brown in semi-moist

704

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0084

Date December 6, 1995 **Time** 1058

Technical Area 33 **Operable Unit** 1122

QA/QC Type Performance Eval

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

	Location ID	Start Depth	End Depth	Units
1	NA	0	6	in

Sample Type Soil - Surface

Sample Location

Name (Print) Kristi Beguin

Signature Kristi A Beguin

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-95-0008

Weather Fair, Breezy - Winds from SW 5-15mph. Cool - 54°F

Sample Description 01 Performance Evaluation Ret. on Soil #2

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
NA	0 to	6 in	FID	N/A	ppm	
NA	0 to	6 in	Field HE			
NA	0 to	6 in	Field Rad (alpha)		cpm	
NA	0 to	6 in	Field Rad (beta/gam)		cpm	
NA	0 to	6 in	PID		ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

N/A

Comments:

N/A

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0002

Date November 6, 1995 **Time** 1045 **Sample Type** Sediment

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-01530

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01530	0	6	in

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTALCN	125 ml Polyethylene	None	1122-95-0003
02	SEMI	125 ml Glass	Ice	1122-95-0003
03	VOAGCMS	125 ml Septum Amber gl	Ice	1122-95-0003

Weather cloudy/sunny

Sample Description see comments

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01530	0 to	6 in	FID	NA	ppm	
33-01530	0 to	6 in	Field HE	NA		
33-01530	0 to	6 in	Field Rad (alpha)	NA	cpm	
33-01530	0 to	6 in	Field Rad (beta/gam)	NA	cpm	
33-01530	0 to	6 in	PID	bkg	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 2, photo # 2 & 3

Comments:

sample description: same sands/silts, lots of dried organic material, rust colored, dry

sample collected from within septic tank - depth of tank ~ 7 ft.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0002

Date November 6, 1995 **Time** 1045

Technical Area 33 **Operable Unit** 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01530	0	0	ft

Sample Type Sediment

Sample Location 33-01530

Name (Print) ~~Linda Fluk~~ 11-7-95 Kenny Hanel

Signature

These Samples were collected using LANL ER SOP 06.09

ID	Analysis	Container	Preservative	C of C Control No.
01	METTALCN	125 ml Polyethylene	None	1122-95-0003
02	SEMI	125 ml Glass	Ice	1122-95-0003
03	VOAGCMS	125 ml Septum Amber gl	Ice	1122-95-0003

Weather Cloudy / Sunny

Sample Description See below

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01530	0 to	0	FID	NA	ppm	
33-01530	0 to	0	Field HE	NA		
33-01530	0 to	0	Field Rad (alpha)	NA	cpm	
33-01530	0 to	0	Field Rad (beta/gam)	NA	cpm ~~dkg~~ KB	
33-01530	0 to	0	PID		ppm dkg	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll # 2, photo # 2 + 3

Comments:

Sample description: Some sands/silts, lots of dried organic material, rust color, dry

Septum

[illegible]

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0081

Date December 5, 1995 **Time** 1023 **Sample Type** Soil - Subsurface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-004(b)

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01548	8.5	10.5	ft

These Samples were collected using LANL ER SOP 06.24

ID	Analysis	Container	Preservative	C of C Control No.
01	METTALCN	125 ml Polyethylene	None	1122-95-0004
02	SEMI	125 ml Glass	Ice	1122-95-0004
03	TU	125 ml Polyethylene	None	1122-95-0004
04	VOAGCMS	125 ml Septum Amber gl	Ice	1122-95-0004

Weather Clear skies, cool, ~54 degrees F, breezes from the SW 0-5 mph.

Sample Description Light pinkish-gray crushed Qbt Tuff. Very dry. Many phenocrysts. See comments.

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01548	8.5 to 10.5 ft	FID	N/A	ppm	
33-01548	8.5 to 10.5 ft	Field HE	N/A		
33-01548	8.5 to 10.5 ft	Field Rad (alpha)	N/A	cpm	
33-01548	8.5 to 10.5 ft	Field Rad (beta/gam)	95	cpm	
33-01548	8.5 to 10.5 ft	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 2; Photo #25 and 26 of sample material. Photo 25 has the wrong depth on the white board, 26 is correct. #27 and 28 of the drill rig location at the septic tank.

Comments:

Soil description: phenocrysts-5%. Pumice lenses, pumice gravels 10%. Very loosely compacted, moderate fragmentation.

Approx. 10 feet SW of septic tank opening. Much chamisa. Grasses, weeds (all dry and dead). On Mesa top. At 10:42 hole is backfilled to soil surface with cuttings.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0081

Date December ~~4~~ 5, 1995 KCAB 12/5/95 **Time** 1023

Technical Area 33 **Operable Unit** 1122

QA/QC Type None

Composite: ○ Yes ◉ No

Composite Type: None

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01548	~~0~~ 8.5	~~0~~ 10.5	ft.

KCCB 12/5/95

Sample Type Soil - Subsurface

Sample Location 33-004(b)

Name (Print) KCCB 12/5/95 ~~Linda Fluk~~ Kristi Begoin

Signature Kristi L. Begoin

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTALCN	125 ml Polyethylene	None	1122-95-0004
02	SEMI	125 ml Glass	Ice	1122-95-0004
03	TU	125 ml Polyethylene	None	1122-95-0004
04	VOAGCMS	125 ml Septum Amber gl	Ice	1122-95-0004

Weather Clear skies, cool ~ 54°F, Breezy from SW 0-5 mph

Sample Description Light pinkish-gray, crushed Qbt tuff. Very dry. Many

Field Screening Phenocrysts - 5%, ~~Tuff~~ KCAB 12/5/95 Pumice lenses, Pumice gravels - 10%

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01548	0 to	0	FID	N/A	ppm	
33-01548	0 to	0	Field HE	N/A		
33-01548	0 to	0	Field Rad (alpha)	N/A	cpm	
33-01548	0 to	0	Field Rad (beta/gam)	95	cpm	
33-01548	0 to	0	PID	0	ppm	

Photo (Roll, Frame, Azimuth, Subject, Participants): Photo# 25, Roll 2 Photo 25 shows wrong depth Photo 26 is correct (26 & 27 & 28 of drill rig location)

Comments: Approx. 10 feet SW of Tank opening.
Much Chamisa; grasses, weeds (All dry & dead)
On mesa top.

10:42: Hole is backfilled with cuttings to soil surface.

Los Alamos National Laboratory Environmental Restoration Program

SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0079

Date November 7, 1995 **Time** 0945 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location**

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** _____

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01406	0	6	in

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-95-0003

Weather cool, ~60 degrees F, clear, sunny, dry, still

Sample Description Tuff in silty sand matrix

Field Screening

Loc ID	Depth	Screening Method	Result	Units	Comments
33-01406	0 to 6 in	FID	NA	ppm	
33-01406	0 to 6 in	Field HE	NA		
33-01406	0 to 6 in	Field Rad (alpha)	NA	cpm	
33-01406	0 to 6 in	Field Rad (beta/gam)	98	cpm	bkg
33-01406	0 to 6 in	PID	0-1	ppm	bkg

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 2 #7

Comments:

soil description: light brown-tan colored, mostly tuff in silty sand matrix, dry, little organics. Same location as that collected 1994 - sample ID# AAA9763

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SAMPLE COLLECTION LOG FOR SAMPLE ID 0333-95-0078

Date November 6, 1995 **Time** 0945 **Sample Type** Soil - Surface

Technical Area 33 **Operable Unit** 1122 **Sample Location** 33-1406

QA/QC Type None

Composite: ○ Yes ◉ No **Name (Print)** Linda Fluk

Composite Type: None **Signature** Linda Fluk

Grabs:

	Location ID	Start Depth	End Depth	Units
1	33-01405	0	6	in

These Samples were collected using LANL ER SOP

ID	Analysis	Container	Preservative	C of C Control No.
01	METTAL	125 ml Polyethylene	Ice	1122-95-0003

Weather Cool ~60°F, clear, sunny, dry, still

Sample Description Tuff in silty sand matrix

Field Screening

Loc ID	Depth		Screening Method	Result	Units	Comments
33-01405	0 to	6 in	FID	NA	ppm	
33-01405	0 to	6 in	Field HE	NA		
33-01405	0 to	6 in	Field Rad (alpha)	NA	cpm	
33-01405	0 to	6 in	Field Rad (beta/gam)	93	cpm	bkg
33-01405	0 to	6 in	PID	0-1	ppm	bkg.

Photo (Roll, Frame, Azimuth, Subject, Participants):

Roll 2 # 7

Comments:

soil descr.: light brown-tan colored Mostly tuff in silty sand matrix, dry, little org.

Same location as that collected 1994 -

Sample ID # AAA 9763

9763

LOCATION 33-01548

TA OU 11

X Coordinate (Easting, NAD-83)	1639312.3
Y Coordinate (Northing, NAD-83)	1736042.7
Surface Elevation (ft)	6,413.3

Coordinate Precision	Surveyed	Date Assigned	11/03/96
Coordinate Type	Relative	Coordinate Source	ICF KE Survey Dept.
Relative to	A3302	Field Control No	511
		Location Type	Bore

Description

0333-96-0081

Comments

LOCATION 33-01530

TA OU 11

X Coordinate (Easting, NAD-83)	1639321.2
Y Coordinate (Northing, NAD-83)	1736047.8
Surface Elevation (ft)	6,408.7

Coordinate Precision	Surveyed	Date Assigned	11/03/96
Coordinate Type	Relative	Coordinate Source	
Relative to	A3302	Field Control No	510
		Location Type	Other

Description

33-1530 Septic Tank

Comments